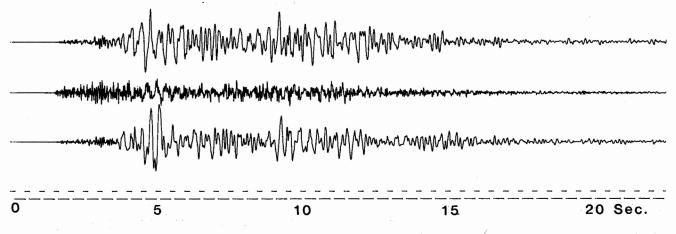
CSMIP STRONG-MOTION RECORDS FROM THE BIG BEAR, CALIFORNIA EARTHQUAKE OF JUNE 28, 1992



Accelerogram from Big Bear Lake

CALIFORNIA DEPARTMENT OF CONSERVATION
DIVISION OF MINES AND GEOLOGY
OFFICE OF STRONG MOTION STUDIES
REPORT OSMS 92-10

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CSMIP STRONG-MOTION RECORDS

FROM THE

BIG BEAR, CALIFORNIA

EARTHQUAKE OF 28 JUNE 1992

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CSMIP STRONG-MOTION RECORDS FROM THE BIG BEAR,

CALIFORNIA EARTHQUAKE OF 28 JUNE 1992

INTRODUCTION

Strong-motion accelerograms were recorded at 132 stations of the California Strong Motion Instrumentation Program (CSMIP) after the magnitude 6.6 $\rm M_{\rm S}$ earthquake that occurred near Big Bear Lake, California on June 28, 1992. The epicenter is located in the San Bernardino Mountains, about 11 km southeast of Big Bear Lake and 45 km northeast of San Bernardino. The epicentral distance of the CSMIP stations ranges from 11 km for the closest (Big Bear Lake) to about 180 km for the farthest (Santa Felicia Dam). The greatest ground acceleration recorded by CSMIP ground-response stations was 0.57 g at Big Bear Lake. The greatest accelerations recorded on structures were 0.75 g recorded at a concrete tilt-up building and 1.02 g at a freeway interchange.

The estimated location and magnitude of the Big Bear earthquake are: Epicenter: 34.201N, 116.826W. Depth: 7 km (Caltech/USGS) Origin Time: 15:05:30.5, 28 June 1992 UTC (8:05 AM, PDT) Magnitude: 6.6 $M_{\rm S}$ (NEIC), 6.5 $M_{\rm L}$ (Caltech), 6.4 $M_{\rm W}$ (Caltech)

Approximately 3 hours before the Big Bear earthquake, the magnitude 7.5 $\rm M_{S}$ Landers earthquake occurred about 35 km east of the Big Bear epicenter. CSMIP strong-motion records from the Landers earthquake are included in the OSMS 92-09 report (1992a). Most of the damage due to the Big Bear earthquake was confined to the mountain communities in the Big Bear area. According to analyses by the USGS and Caltech, the earthquake had a left-lateral strike-slip mechanism along a N58E fault. There was no surface faulting reported. This report includes all CSMIP data from the Big Bear earthquake and supersedes the first Quick Report distributed on June 30 (CSMIP, 1992b) and the second Quick Report distributed on July 10 (CSMIP, 1992c).

HIGHLIGHTS OF CSMIP STRONG-MOTION DATA

Numerous new stations have been installed by CSMIP in the Los Angeles region in the last two years. Many of the stations are along the San Andreas fault system, and are part of a large planned array. These new stations have been sited in carefully studied geologic environments, including crystalline rock outcrops.

At the 132 CSMIP stations that recorded the Big Bear earthquake, a total of 218 records were obtained from over 950 strong-motion sensors. The 132 stations include 79 ground-response stations and 53 extensively-instrumented structures. The 53 structures include 45 buildings, 5 dams, a major freeway interchange, an airport control tower and a power plant.

The maximum acceleration values and the station parameters are presented in the tables at the beginning of this report for all records recovered. Most of the records are reproduced in this report as well. Records with very small amplitude (e.g., less than 5% g) generally have not been reproduced here, however.

Many of the CSMIP records from this event were recorded on digital recorders. These instruments provide enhanced frequency response and improved resolution at low levels of motion. They also record motion before the onset of the strong earthquake shaking (pre-event memory). Digital records allow presentation of the records in ways not practical for analog records. Many of the low-amplitude digital records have been plotted with 4x vertical exaggeration so that details in the record can be observed. In addition, records from individual sensors in the structures with digital recorders have been arranged in this report in an order that allows convenient visual interpretations of the records.

For some stations, because of the long duration and the traditional 1 sec/cm scale of accelerograms, important motion in the record occurs beyond the 22 seconds visible on a single panel, so the records from these stations include a second panel in this report.

Some specific highlights of the records include:

- Big Bear Lake. The closet CSMIP station is Big Bear Lake, located 11 km from the epicenter, which recorded maximum accelerations of 0.57 g horizontal and 0.21 g vertical. The duration of strong shaking was about 15 seconds. The Big Bear Lake record is also reproduced on the cover of this report.
- San Bernardino area records. Records were obtained from six buildings, one bridge and two ground-response stations in the City of San Bernardino. The area is about 45 km from the epicenter. The maximum recorded ground acceleration was 0.13 g. The maximum recorded accelerations in structures were 0.40 g at a 3-story steel building and 1.02 g at a freeway interchange discussed below. The buildings included three steel buildings, two concrete buildings, and a 1-story unreinforced-masonry infill building. The responses of these buildings are similar in amplitudes but shorter in duration than those during the Landers earthquake.
- San Bernardino I-10/215 Interchange. Another important set of records was obtained from this freeway overpass southwest of San Bernardino. The overpass instrumented is the connecting structure between I-10 from Los Angeles and I-215 toward San Bernardino. The bridge is a long and curved structure, about 2540 feet long and 90 feet high near the center. It is typical of many in Southern California and similar to some which sustained heavy damage in the 1971 San Fernando earthquake. The bridge was recently strengthened by Caltrans and instrumented with 34 sensors by CSMIP. The ground motion near the bridge was 0.11 g. Higher accelerations (1.02 g) were recorded on the bridge deck. Similar to the Landers record, there are many spikes in the Big Bear record which indicate relative motion of the decks across the hinges.
- Redlands area records. Records were obtained from two buildings in the City of Redlands, about 36 km from the epicenter. The maximum recorded ground acceleration was 0.17 g. The buildings include a 7-story steel frame building and a 1-story concrete tilt-up warehouse. The responses of both buildings to the Big Bear earthquake were larger than those to the Landers earthquake. A peak acceleration of 0.75 g and large roof diaphragm motions were recorded at the concrete tilt-up warehouse.

- Palm Springs area records. The Joshua Tree station recorded 0.29 g during the Landers earthquake; during the Big Bear earthquake the peak acceleration was only 0.06 g. An acceleration of 0.23 g was recorded at the Desert Hot Springs station, about 40 km southeast of the epicenter. The Snow Creek station is a new station located on hard granitic rock at the base of Mount San Jacinto, about 37 km from the epicenter. The peak acceleration was 0.17 g which is larger than the 0.06 g recorded during the Landers earthquake. Records were also obtained from two buildings (one steel and one concrete) in the area. A 4-story hospital building in Palm Springs recorded a peak acceleration 0.08 g on the ground floor and 0.19 g at the roof. The motions are generally smaller than those during the Landers earthquake.
- Downtown Los Angeles records. Records were obtained from six buildings and two ground-response stations in downtown Los Angeles, about 130 km from the epicenter. The buildings include three steel buildings (54-, 52- and 17-story), a 17-story concrete building, and two unreinforced-masonry (URM) infill buildings. The 54-story building, built in 1991, is the tallest building instrumented by CSMIP and uses a framed tube system to resist lateral force. Maximum recorded acceleration was 0.03 g on the ground and 0.07 g in this building. Larger structural accelerations were recorded at a 17-story precast concrete building (0.17 g) and a 9-story URM infill building (0.18 g).
- Pomona area records. The stations in the Pomona area include a ground-response station, a 2-story concrete building and a 6-story URM-infill building. Maximum ground acceleration was 0.03 g. The peak acceleration recorded from the 6-story URM-infill building was 0.13 g, which is less than the amplitude recorded during the Landers earthquake (0.19 g) and the amplitude recorded during the 1990 Upland earthquake (0.37 g).
- Base-isolated building records. Records were obtained at three base-isolated buildings: 1) 2-story Los Angeles Fire Command/Control Building. An acceleration of 0.05 g was recorded at the foundation, 0.05 g above the isolators, and 0.05 g at the roof. 2) 7-story university hospital. Peak acceleration at the foundation, above the isolators and at the roof level was 0.05 g, 0.03 g, and 0.06 g, respectively. 3) 4-story Rancho Cucamonga Law and Justice Center. A peak acceleration of 0.07 g was recorded at the roof, 0.06 g at the base, and 0.05 g at the free field site. The responses of these three base-isolated buildings are less than those during the Landers earthquake.
- Retrofitted 8-story Office Building in Seal Beach. This is the first building retrofitted with seismic isolators in California. The concrete frame/waffle slab structure was constructed in 1967 and retrofitted in 1990. The retrofit includes a ductile concrete moment frame added to strengthen the exterior and the addition of isolators installed midway between the first and second floors. The building, approximately 126 km from the epicenter, recorded 0.04 g at the base and 0.08 g at the roof.
- Hospital building records. Records from a total of eight hospital buildings were obtained from the Big Bear earthquake. The eight hospitals, including the 7-story base-isolated university hospital discussed above, are located at distances ranging from 46 km to 150 km from the epicenter. The largest acceleration was recorded at a 5-story hospital in San Bernardino which had 0.32 g on the roof.

ADDITIONAL STRONG-MOTION DATA

Several agencies in addition to CSMIP have strong-motion instruments in the southern California area. The University of Southern California maintains a network of 80 ground-response stations. The U.S. Geological Survey maintains instruments of its own and of other agencies in this area, and has published a preliminary report on selected records from six stations (USGS, 1992). In addition to these stations, smaller groups of stations are maintained by Caltech, Southern California Edison and other agencies. Finally, many private building owners in the City of Los Angeles have instruments in their buildings, as required by the City code.

ORDER OF DATA PRESENTATION - HOW TO USE THIS REPORT

Three tables are included in this report to make cross-referencing stations and records as convenient as possible. The CSMIP strong-motion stations that recorded this earthquake are shown on the map in Figure 1 and on the inset maps of the San Bernardino area (Figure 2) and downtown Pasadena and Los Angeles (Figure 3). Each station is identified by a three-digit code on the map. This code and the corresponding station name are cross-referenced in Table 1, which, for convenience, appears near the station maps.

Once the station name is known, Table 2, which lists the stations in alphabetical order, can be used to obtain station characteristics such as coordinates and site geology. Table 3 lists earthquake- and station-dependent information, such as epicentral distance, sensor orientations, and peak acceleration values. Table 3 is arranged in approximately increasing epicentral distance. The number of the page on which the accelerogram is reproduced in this report is listed in all three tables.

The accelerograph record section of this report has three main groupings: ground-response stations, building stations and lifeline structure stations. The first section contains selected ground-response records, one record per page. In the case of low amplitude records from digital instruments, the records are plotted with a 4x vertical exaggeration so that details of the record can be easily seen. Note that some of the lowest amplitude records are not reproduced in this report.

The second section contains building response records. The presentation of the building records includes a picture of the building, a brief description of the structural system, and a schematic of the sensor layout. (For lower amplitude records, the picture of the building is not included.) Please note that, by convention, the orientation of sensors in a building is given by reference directions parallel to the principal building dimensions; the relationship of these directions to true geographic directions is given on the sensor layout and the building record. The introductory information is followed by one to four pages of records, depending on the number of sensors installed in the building. Selected records from digital instruments are plotted with a 4x vertical exaggeration. Some buildings have a groundresponse station nearby to provide reference, or freefield, ground motion information. In these cases, the page number on which the reference record appears is given on the record. Note that some of the lowest amplitude building records are not reproduced in this report, but the peak values are included in Table 3.

The third section contains from <u>lifeline structure records</u>. The presentation for lifeline structures follows the format used for building records.

ACKNOWLEDGEMENTS

The California Strong Motion Instrumentation Program extends its appreciation to the individuals and organizations which have permitted and cooperated in the installation of seismic strong-motion equipment on their property. CSMIP also extends its appreciation to the members of the Strong Motion Instrumentation Advisory Committee and its subcommittees. Funding for instrumenting some of the hospitals in this report was provided by the Office of State-wide Health Planning and Development. Funding for the I-10/215 Interchange in San Bernardino was partially provided by the California Department of Transportation.

The records presented in this report were made possible through the efforts of many CSMIP technicians, both present and past, who installed and maintained the stations over the years. Record recovery following this earthquake was performed by W. Stephan, R. Meneely, K. Breitwieser, D. Driver, W. Thomson, D. Tarquino and R. Ayala. C. Petersen coordinated the extensive record recovery. L. Barrett, N. Seibert, Y. Corona and S. Rowley assisted in the preparation of this report. The efforts of all those involved made the timely publication of these data possible.

REFERENCES

- CSMIP (1992a). CSMIP Strong-Motion Records from the Landers, California Earthquake of June 28, 1992, Calif. Dept. of Conservation, Div. of Mines and Geology, Report OSMS 92-09, 330 pp., August 5, 1992.
- CSMIP (1992b). Quick Report on CSMIP Strong-Motion Records from the June 28, 1992 Earthquakes near Landers and Big Bear, California, 22 pp., 30 June 1992. [The present report supersedes the First Quick Report.]
- CSMIP (1992c). Second Quick Report on CSMIP Strong-Motion Records from the June 28, 1992 Earthquakes near Landers and Big Bear, California, 10 pp., 10 July 1992. [The present report supersedes the Second Quick Report.]
- USGS (1992). Selected Accelerograms from U.S. Geological Survey Stations that Recorded the Landers and Big Bear Earthquakes of June 28, 1992, 13 pp.

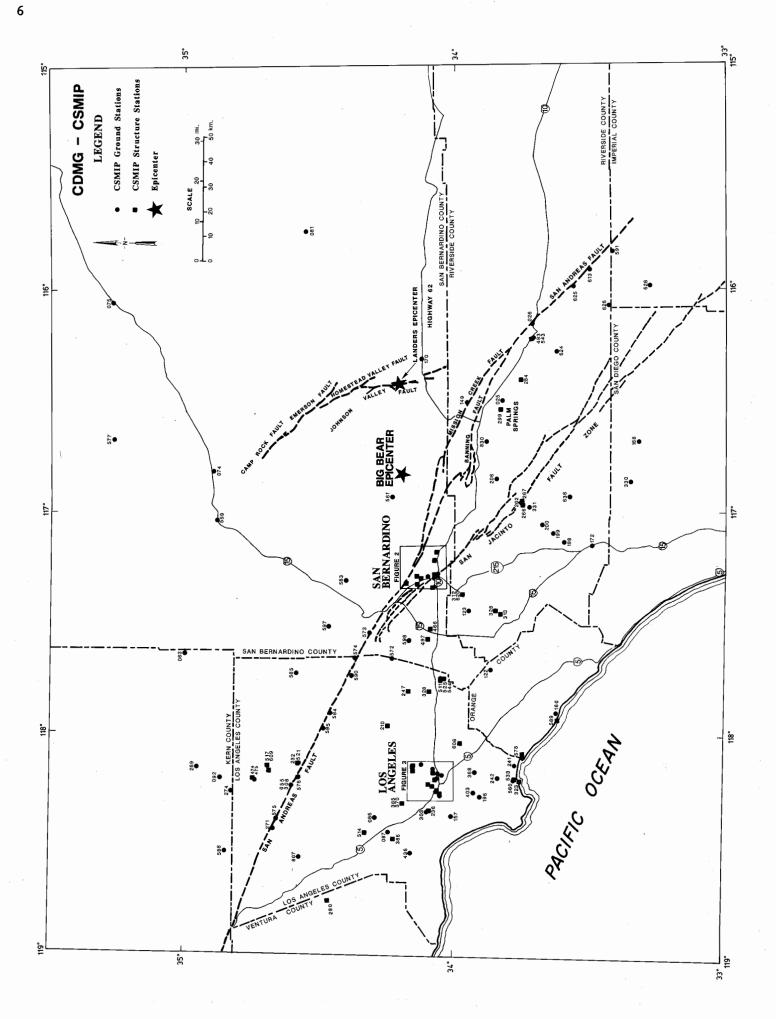


TABLE 1 Station-Code Reference Table

		Record on			Record on
Code	Station Name	Page	Code	Station Name	Page
025	Palm Springs - Airport	53	284	Palm Desert - 4-story Medical Office Bldg.	178
026	Indio - Coachella Canal	40	285		73
055	Leona Valley #5 - Ritter Ranch	43	287	San Bernardino - 6-story Hotel	73 77
074	Yermo - Fire Station	67	299	Palm Springs - 4-story Hospital	105
075	Baker - Fire Station			Los Angeles - Hollywood Storage Bldg. FF	44
081	Amboy	34	308	Leona Valley #4	
083	Boron - Fire Station	35		Riverside - 13-story Government Office Bldg.	
087	Arleta - Nordhoff Ave Fire Sta.		313	Lake Mathews - Main Dam	222
088	Pacoima - Kagel Canyon Fire Sta. #74			Long Beach - 7-story Office Bldg.	134
	Rosamond - Airport			Lake Mathews - Dike 1	223
122	Featherly Park - Park Maint. Bldg.	38		Puddingstone Reservoir - Puddingstone Dam	
123	Riverside - Airport	58		Palomar Mountain - Palomar Observatory	
149	Desert Hot Springs - Fire Station	33		Hemet - Stetson Ave Fire Station	38
	Los Angeles - Baldwin Hills	44		Downey - County Maint. Bldg.	35
160	Newport Beach - Irvine Ave. Fire Station	53		Burbank - 6-story Commercial Bldg.	119
	Puerta La Cruz - USFS Storage Bldg.	56		Burbank - 10-story Residential Bldg.	122
	Joshua Tree - Fire Station	40		Van Nuys - 7-story Hotel	203
172	Temecula - 6th & Mercedes	66		Los Angeles - Obregon Park	46
196	Inglewood - Union Oil Yard			San Marino - Southwestern Academy	
198	Murrieta Hot Springs - Collins Ranch	46		Los Angeles - 116th St. School	
199	Winchester - Bergman Ranch	66		Tarzana - Cedar Hill Nursery	65
	Winchester - Hidden Valley Farms	67		Alhambra - Fremont School	
202	San Jacinto - Valley Cemetery	58		Etiwanda - Power Plant	225
206	Silent Valley - Poppet Flat	65	468	Los Angeles - 8-story CSULA Admin. Bldg.	147
210		219		Lancaster - Fox Airfield Airport Control Tower	
	Palmdale - 4-story Hotel			Lancaster - Fox Airfield Grounds	
	Los Angeles - Hollywood Storage Bldg.	156	481	Redlands - 7-story Commercial Bldg.	101
	Long Beach - Recreation Park			Redlands - 1-story Warehouse	97
242	Long Beach - Rancho Los Cerritos	43		Rancho Cucamonga - Law & Justice Center Lo	
247	Big Dalton Reservoir - Big Dalton Dam		497	Rancho Cucamonga - Law and Justice Center	109
266	Hemet - 1-story Library	127		Pomona - 2-story Commercial Bldg.	192
267	Hemet - 4-story Hospital	129		Sylmar - 6-story County Hospital Parking Lot	
				Sylmar - 6-story County Hospital	
	Lake Hughes #1 - Fire Station #78			San Bernardino - 9-story Commercial Bldg.	81
	Rosamond - Godde Ranch			San Bernardino - 3-story Office Bldg.	89
280	Lake Piru - Santa Felicia Dam			Lancaster - 3-story Office Bldg.	133
				,	

Figure 1. Index Map showing CSMIP stations which recorded the June 28, 1992 Big Bear Earthquake. (see facing page)

The San Andreas fault, the San Jacinto fault, the epicenter of the Landers earthquake and its associated surface rupture are shown for reference. Stations are identified by a three digit code cross-referenced to station names in Table 1. Within the San Bernardino and downtown Los Angeles areas are closely-spaced CSMIP stations; please refer to inset Figures 2 and 3 for these metropolitan areas.

TABLE 1
Station-Code Reference Table (Continued)

Code		Record on Page	Code	Station Name	Record on Page
521	Palmdale - Hwy 14 & Palmdale Blvd		586	Neenach - Sacatara Creek	
522	San Bernardino - 2nd & Arrowhead	61	589	Newport Beach - 11-story Hospital	175
525	Pomona - 4th & Locust	56		Wrightwood - Jackson Flat	
533	Long Beach - 15-story Government Office Bldg	 -	591	_	51
540		125	592	Los Angeles - City Terrace	45
541	Pasadena - 6-story Office Bldg.	180		Littlerock - Brainard Canyon	
542	San Bernardino - E & Hospitality	62		Phelan - Wilson Ranch Road	55
543	Indio - Riverside Co. Fairgrounds	41	598	Rancho Cucamonga - Deer Canyon	57
544	Pomona - 6-story Commercial Bldg.	194		Los Angeles - 17-story Residential Bldg.	162
546	Pasadena - 12-story Commercial/ Office Bldg.	186		Los Angeles - 52-story Office Bldg.	165
559	Barstow - Vineyard & H St.	34		San Diego - 19-story Commercial Bldg.	200
560	Long Beach - City Hall Grounds			Los Angeles - 7-story University Hospital	142
561	Big Bear Lake - Civic Center Grounds	33		Los Angeles - University Hospital Free Field	48
566	Pasadena - 12-story Office Bldg.	189		Whittier - 8-story Hotel	206
569	Los Angeles - 15-story Gov. Office Bldg.	159	607	Lake Hughes 12A	
571	Pasadena - 9-story Commercial Bldg.	183	609	Lancaster - 5-story Hospital	130
572	Mt. Baldy - Elementary School	50		Los Angeles - Temple & Hope	47
573	Wrightwood - Nielson Ranch	68	612	Los Angeles - Pico & Sentous	
574	Wrightwood - Swarthout Valley	69	613	North Shore - Salton Sea State Park HQ	52
575	Elizabeth Lake	37	620	Riverside - 2-story Govt. Office Bldg.	197
576	Anaverde Valley - City Ranch			San Bernardino - 1-story Commercial Bldg.	93
577	Fort Irwin		624	Lake Cahuilla	42
578	Seal Beach - 8-story Office Bldg.	113	625	Mecca - CVWD Yard	49
578	Seal Beach - 8-story Office Bldg. Parking Lot	63	626	Desert Shores	36
579	Los Angeles - 9-story Office Bldg.	150	628	Salton City	60
580	Los Angeles - 2-story Fire Command Bldg.	139	629	Los Angeles - 54-story Office Bldg.	170
581	Los Angeles - 12-story Com/Office Bldg.	153	630	Snow Creek	64
583	Hesperia - 4th & Palm	39	631	San Bernardino - I10/215 Interchange	211
584	Pearblossom - Pallet Creek	54	634	San Bernardino - 5-story Hospital	85
585	Palmdale - Black Butte			Sage - Fire Station	59

Footnote: Peak accelerations for all stations which recorded the Big Bear earthquake are listed in Table 3. However, certain records with small amplitude are not reproduced in the report.

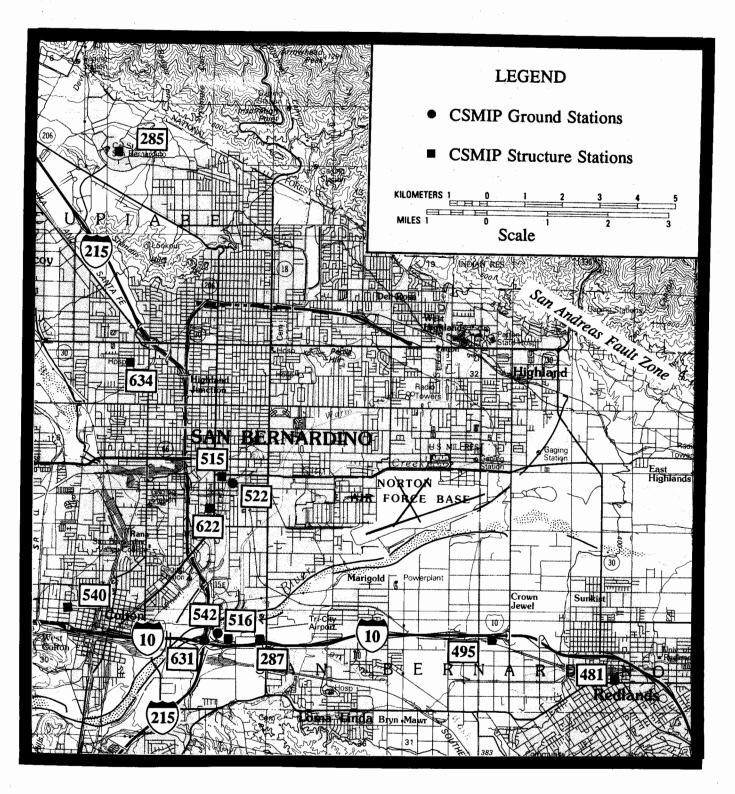


Figure 2. Inset section of Figure 1 for the San Bernardino area.

The 3-digit code identifies CSMIP stations as follows:

San Bernardino — 6-story Hotel	522	San Bernardino — 2nd & Arrowhead
San Bernardino — 5-story CSUSB Library	540	Colton — 1-story School Gym
Redlands — 7-story Commercial Building	542	San Bernardino — E & Hospitality
Redlands — 1-story Warehouse	622	San Bernardino — 1-story Commercial Bldg.
San Bernardino — 9-story Commercial Building	631	San Bernardino — I-10/215 Interchange
San Bernardino — 3-story Office Building	634	San Bernardino — 5-story Hospital
	San Bernardino — 5-story CSUSB Library Redlands — 7-story Commercial Building Redlands — 1-story Warehouse	San Bernardino — 5-story CSUSB Library540Redlands — 7-story Commercial Building542Redlands — 1-story Warehouse622San Bernardino — 9-story Commercial Building631

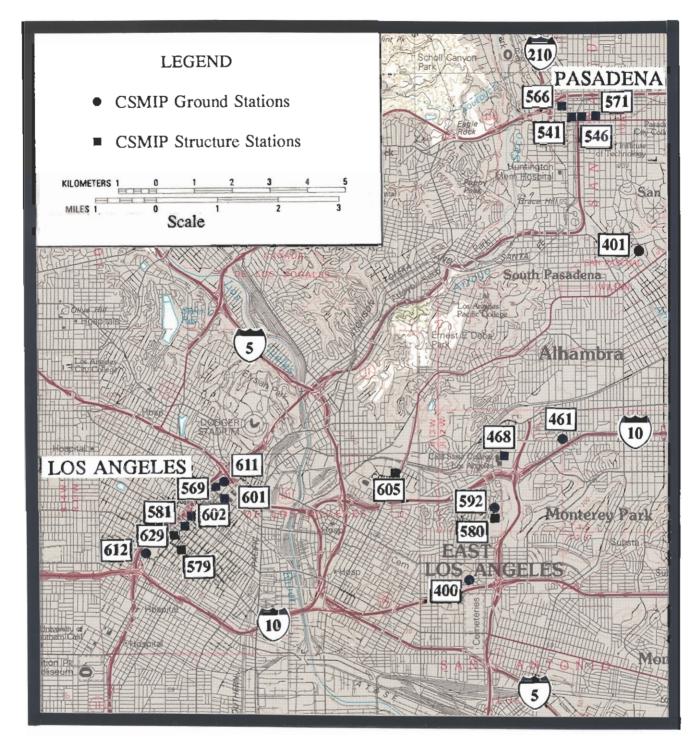


Figure 3. Inset section of Figure 1 for downtown Los Angeles and Pasadena. The 3-digit code identifies CSMIP stations as follows:

	6 6		· · · · · ·
400	LA — Obregon Park	579	LA — 9-story Office Bldg.
401	San Marino — Southwestern Academy	580	LA — 2-story Fire Command/Control Bldg.
461	Alhambra — Fremont School	581	LA — 12-story Commercial/Office Bldg.
468	LA — 8-story CSULA Administration Bldg.	592	LA — City Terrace
541	Pasadena — 6-story Office Bldg.	601	LA — 17-story Residential Bldg.
546	Pasadena — 12-story Commercial/Office Bldg.	602	LA — 52-story Office Bldg.
566	Pasadena — 12-story Office Bldg.	605	LA — 7-story University Hospital
569	LA — 15-story Government Office Bldg.	611	LA — Temple and Hope
571	Pasadena — 9-story Commerical Bldg.	612	LA — Pico and Sentous
		629	LA — 54-story Office Bldg.

TABLE 2
CSMIP Strong-Motion Stations - Big Bear Earthquake

Station Name	N.Lat.	W.Long.	Station No.	Code	Site <u>Geology</u>	Record on Page*
Alhambra - Fremont School	34.070	118.150	24461	461	Alluvium	
Alpine - Fire Station	32.838	116.724	02467	467	Alluvium	nt
Altadena - Eaton Canyon Park	34.177	118.096	24402	402	Alluvium	nt#
Amboy	34.560	115.743	21081	081	Alluvium (~3m) over basalt	34
Anaverde Valley - City Ranch	34.580	118.199	24576	576	Alluvium	
Antelope Buttes	34.758	118.361	24310	310	Weathered granitic rock	nt
Arleta - Nordhoff Ave Fire Sta.	34.236	118.439	24087	087	Alluvium	-
Baker - Fire Station	35.272	116.066	32075	075	Deep alluvium	
Barstow - Vineyard & H St.	34.887	117.047	23559	559	Alluvium	34
Big Bear Lake - Civic Center Grounds	34.238	116.935	22561	561	Shallow alluvium over granite bedrock	33
Big Dalton Reservoir - Big Dalton Dam	34.170	117.808	23247	247	Granitic rock (diorite)	
Bombay Beach - Bertram	33.397	115.776	11627	627	Sandstone (indurated)	nt#
Boron - Fire Station	35.002	117.650	33083	083	Deep alluvium	35
Burbank - 10-story Residential Bldg.	34.187	118.311	24385	385	Alluvium	122
Burbank - 6-story Commercial Bldg.	34.185	118.308	24370	370	Alluvium	119
Castaic - Halsey Canyon	34.459	118.650	24277	277	Alluvium	nt
Castaic - Old Ridge Route	34.564	118.642	24278	278	Sedimentary rock	nt
Century City - LACC North	34.063	118.418	24389	389	Terrace deposits	nt
Century City - LACC South	34.062	118.416	24390	390	Terrace deposits	nt
Cogswell Reservoir - Cogswell Dam	34.245	117.964	23210	210	Weathered granitic rock	219
Colton - 1-story School Gym	34.072	117.335	23540	540	Deep alluvium	125
Desert Hot Springs - Fire Station	33.962	116.509	12149	149	Deep alluvium	33
Desert Shores	33.426	116.078	12626	626	Alluvium	36
Downey - County Maint. Bldg.	33.924	118.167	14368	368	Deep alluvium	35

TABLE 2
CSMIP Strong-Motion Stations (Continued)

Station Name	N.Lat.	W.Long.	Station No.	<u>Code</u>	Site Geology	Record on Page*
Elizabeth Lake	34.662	118.387	24575	575	Lake & fluvial deposits	37
Etiwanda - Power Plant	34.091	117.527	23466	466	Alluvium	225
Fairmont Reservoir - Fairmont Dam Right Abutment	34.704	118.426	24270	270	Granitic rock	nt
Featherly Park - Park Maint. Bldg.	33.869	117.709	13122	122	Alluvium	38
Fort Irwin	35.268	116.684	24577	577	Deep alluvium	
Hemet - 1-story Library	33.748	116.966	12266	266	Deep alluvium	127
Hemet - 4-story Hospital	33.750	116.959	12267	267	Deep alluvium	129
Hemet - Stetson Ave Fire Station	33.729	116.979	12331	331	Deep alluvium	38
Hesperia - 4th & Palm	34.405	117.311	23583	583	Alluvium	39
Huntington Beach - Lake Street Fire Station	33.662	117.997	13197	197	Sand (~4m) over deep alluvium	nt
Indio - 4-story Govt. Office Bldg.	33.714	116.221	12493	493	Deep alluvium	nr2
Indio - Coachella Canal	33.717	116.156	12026	026	Deep alluvium	40
Indio - Riverside Co. Fairgrounds	33.715	116.221	12543	543	Deep alluvium	41
Inglewood - Union Oil Yard	33.905	118.279	14196	196	Terrace deposits	
Irvine - 8-story UCI Engineering Bldg.	33.645	117.840	13329	329	Soil (~1m) over sandstone	nt
Joshua Tree - Fire Station	34.131	116.314	22170	170	Shallow alluvium over granite bedrock	40
Keene - Fire Station	35.225	118.565	34095	095	Fill & alluvium over granodiorite	nt
Lake Cahuilla	33.628	116.280	12624	624	Granitic bedrock (hard granodiorite)	42
Lake Hughes #1 - Fire Station #78	34.674	118.430	24271	271	Alluvium (~300m) ove granite bedrock	r
Lake Hughes #4 - Camp Mendenhall (near water tank)	34.650	118.478	24469	469	Weathered granitic bedrock	nt
Lake Hughes #4B - Camp Mendenhall	34.650	118.477	24523	523	Weathered granitic bedrock	nt
Lake Hughes #9	34.608	118.558	24272	272	Metamorphic bedrock (gneiss)	nt
Lake Hughes 12A	34.571	118.560	24607	607	Stream channel deposits	
Lake Mathews - Dike 1	33.854	117.444	13326	326	Fill	223

TABLE 2
CSMIP Strong-Motion Stations (Continued)

Station Name	N.Lat.	W.Long.	Station No.	<u>Code</u>	Site <u>Geology</u>	Record on Page*
Lake Mathews - Main Dam	33.836	117.461	13313	313	Fill	222
Lake Piru - Santa Felicia Dam	34.460	118.753	24280	280	Sandstone & shale	
Lancaster - 15th & J	34.688	118.156	24526	526	Alluvium	nt
Lancaster - 3-story Office Bldg.	34.688	118.157	24517	517	Alluvium	133
Lancaster - 5-story Hospital	34.688	118.158	24609	609	Alluvium	130
Lancaster - Fox Airfield Airport	34.739	118.214	24474	474	Alluvium	227
Control Tower Lancaster - Fox Airfield Grounds	34.739	118.214	24475	475	Alluvium	
Leona Valley #1	34.594	118.242	24305	305	Alluvium (~5m) over	nt
Leona Valley #2	34.595	118.243	24306	306	crystalline rock Alluvium	nt
Leona Valley #3	34.596	118.243	24307	307	Metamorphic bedrock	nt
Leona Valley #4	34.598	118.242	24308	308	(gneiss) Alluvium	
Leona Valley #5 - Ritter Ranch	34.600	118.241	24055	055	Alluvium	43
Leona Valley #6	34.604	118.244	24309	309	Alluvium	nt
Littlerock - Brainard Canyon	34.486	117.980	23595	595	Granitic bedrock	
Long Beach - 15-story Government	33.768	118.195	14533	533	(granodiorite) Terrace deposits	
Office Bldg. Long Beach - 5-story CSULB	33.783	118.112	14311	311	Deep alluvium	nr1
Engineering Bldg. Long Beach - 7-story Office Bldg.	33.755	118.200	14323	323	Deep alluvium	134
Long Beach - 7-story Office Bldg. FF	33.754	118.200	14395	395	Deep alluvium	nt
Long Beach - City Hall Grounds	33.768	118.196	14560	560	Terrace deposits	
Long Beach - Rancho Los Cerritos	33.840	118.194	14242	242	Deep alluvium	43
Long Beach - Recreation Park	33.778	118.133	14241	241	Terrace deposits	
Los Angeles - 116th St. School	33.929	118.260	14403	403	Terrace deposits	
Los Angeles - 12-story	34.048	118.260	24581	581	Alluvium	153
Commercial/Office Bldg. Los Angeles - 13-story Office Bldg.	34.050	118.247	24567	567	Alluvium (5m) over sedimentary rock	nt#

TABLE 2
CSMIP Strong-Motion Stations (Continued)

	•					
Station Name	N.Lat.	W.Long.	Station No.	Code	Site Geology	Record on Page*
Los Angeles - 15-story Government Office Bldg.	34.058	118.249	24569	569	Siltstone	159
Los Angeles - 17-story Residential Bldg.	34.053	118.248	24601	601	Siltstone	162
Los Angeles - 2-story Fire Command Control Bldg.	34.053	118.171	24580	580	Siltstone	139
Los Angeles - 3-story Commercial Bldg.	34.058	118.417	24332	332	Terrace deposits	nt
Los Angeles - 5-story Warehouse	34.028	118.223	24463	463	Alluvium	nt
Los Angeles - 52-story Office Bldg.	34.051	118.259	24602	602	Alluvium (7m) over sedimentary rock	165
Los Angeles - 54-story Office Bldg.	34.048	118.260	24629	629	Alluvium over sedimentary rock	170
Los Angeles - 7-story UCLA Math-Science Bldg.	34.069	118.442	24231	231	Terrace deposits	nt
Los Angeles - 7-story University Hospital	34.062	118.198	24605	605	Siltstone	142
Los Angeles - 8-story CSULA Admin. Bldg.	34.067	118.168	24468	468	Siltstone	147
Los Angeles - 9-story Office Bldg.	34.044	118.261	24579	579	Alluvium	150
Los Angeles - Baldwin Hills	34.009	118.361	24157	157	Fill (~1m) over shale, sandstone	44
Los Angeles - City Terrace	34.053	118.171	24592	592	Siltstone	45
Los Angeles - Hollywood Storage Bldg.	34.090	118.338	24236	236	Alluvium (~600m) ove sandstone & shale	r 156
Los Angeles - Hollywood Storage Bldg. FF	34.090	118.339	24303	303	Alluvium (~600m) ove sandstone & shale	r 44
Los Angeles - Obregon Park	34.037	118.178	24400	400	Alluvium	46
Los Angeles - Pico & Sentous	34.043	118.271	24612	612	Alluvium	
Los Angeles - Temple & Hope	34.059	118.246	24611	611	Siltstone	47
Los Angeles - University Hospital Free Field	34.062	118.198	24605	605	Siltstone	48
Los Angeles - Vincent Thomas Bridge	33.750	118.271	14406	406	Alluvium	nt
Malibu - Point Dume	34.077	118.800	24396	396	Marine Terrace deposits over Sedimentary Bed	
Mecca - CVWD Yard	33.564	115.987	11625	625	Deep alluvium	49
Mojave - Hwy 14 & Backus Rd	34.956	118.159	24269	269	Shallow alluvium over volcanic bedrock	
Mojave - Hwys 14 & 58	35.070	118.175	34093	093	Alluvium	nt ·

TABLE 2
CSMIP Strong-Motion Stations (Continued)

Station Name	N.Lat.	W.Long.	Station No.	Code	Site <u>Geology</u>	Record on Page*
Mt. Baldy - Elementary School	34.233	117.661	23572	572	Shallow alluvium over	50
Mt. Wilson - Caltech Seismic Station	34.224	118.057	24399	399	granitic bedrock Granitic rock	nt
Murrieta Hot Springs - Collins Ranch	33.599	117.132	13198	198	(quartz diorite) Thin soil (1m) over weathered granite	46
Neenach - Sacatara Creek	34.848	118.536	24586	586	Alluvium	
Newhall - LA County Fire Sta.	34.390	118.530	24279	279	Alluvium	nt
Newport Beach - 11-story Hospital	33.624	117.929	13589	589	Sedimentary rock	175
Newport Beach - Irvine Ave. Fire Station	33.634	117.902	13160	160	Alluvium	53
Newport Beach - Newport Blvd. & Coast Highway	33.623	117.931	13610	610	Sedimentary rock	nt#
Niland - Fire Station	33.239	115.512	11023	023	Alluvium	nt
North Hollywood - 20-story Hotel	34.138	118.359	24464	464	Sandstone, shale	nt
North Shore - Durmid	33.421	115.831	11591	591	Alluvium over soft sedimentary bedrock	51
North Shore - Salton Sea State Park	33.504	115.913	11613	613	Alluvium over soft sedimentary bedrock	52
HQ Oak Creek Canyon	35.042	118.377	34237	237	Alluvium	nt
Ocean Beach	32.749	117.241	03121	121	Soil & fill (3m) over sedimentary rocks	nt
Oceanside B - Fire Station #3	33.201	117.331	13333	333	Alluvium	nt
Pacoima - Kagel Canyon Fire Sta. #74	34.288	118.375	24088	088	Sandstone	
Pacoima Reservoir - Pacoima Dam	34.334	118.396	24207	207	Metamorpic bedrock	nt
Palm Desert - 4-story Medical Office	33.762	116.407	12284	284	(diorite gneiss) Deep alluvium	178
Bldg. Palm Springs - 4-story Hospital	33.838	116.541	12299	299	Deep alluvium	105
Palm Springs - Airport	33.829	116.501	12025	025	Deep alluvium	53
Palmdale - 4-story Hotel	34.581	118.134	24232	232	Alluvium	
Palmdale - Black Butte	34.586	117.728	23585	585	Granitic bedrock (quartz monzonite)	
Palmdale - Hwy 14 & Palmdale Blvd	34.581	118.135	24521	521	Alluvium	
Palomar Mountain - Palomar Observatory	33.353	116.862	12330	330	Granitic bedrock	

TABLE 2
CSMIP Strong-Motion Stations (Continued)

Station Name	N.Lat.	W.Long.	Station No.	Code	Site <u>Geology</u>	Record on Page*
Pasadena - 12-story Commercial/	34.146	118.146	24546	546	Deep Alluvial fan	186
Office Bldg. Pasadena - 12-story Office Bldg.	34.149	118.151	24566	566	Deep alluvium fan	189
Pasadena - 6-story Office Bldg.	34.146	118.147	24541	541	Deep Alluvial fan	180
Pasadena - 9-story Commercial Bldg.	34.146	118.143	24571	571	Deep alluvial fan	183
Pearblossom - Pallet Creek	34.458	117.909	23584	584	Granitic bedrock	54
Phelan - Wilson Ranch Road	34.467	117.520	23597	597	(quartz diorite) Alluvium	55
Pomona - 2-story Commercial Bldg.	34.054	117.749	23511	511	Alluvium	192
Pomona - 4th & Locust	34.056	117.748	23525	525	Alluvium	56
Pomona - 6-story Commercial Bldg.	34.057	117.752	23544	544	Alluvium	194
Puddingstone Reservoir - Puddingstone Dam	34.091	117.808	23328	328	Crystalline rock, shale	
Puerta La Cruz - USFS Storage Bldg.	33.324	116.683	12168	168	Thin alluvium (8m?)	56
Rancho Cucamonga - Deer Canyon	34.169	117.579	23598	598	over granite Granitic bedrock	57
Rancho Cucamonga - Law & Justice Center Parking Lot (Chns 17-19)	34.104	117.574	23497	497	Deep alluvium (~250m over granitic rock) 112
Rancho Cucamonga - Law and Justice Center	34.104	117.574	23497	497	Deep alluvium (~250m) over granitic rock	109
Rancho Palos Verdes - Hawthorne Blvd.	33.746	118.396	14404	404	Shale and basalt	nt
Redlands - 1-story Warehouse	34.066	117.214	23495	495	Alluvium	97
Redlands - 7-story Commercial Bldg.	34.056	117.178	23481	481	Alluvium	101
Riverside - 13-story Government	33.978	117.373	13312	312	Alluvium	
Office Bldg. Riverside - 2-story Govt. Office	33.979	117.373	13620	620	Alluvium	197
Bldg. Riverside - Airport	33.951	117.446	13123	123	Alluvium	58
Rolling Hills Estates - Rancho Vista	33.787	118.356	14405	405	Shale	nt
School Rosamond - Airport	34.870	118.206	24092	092	Alluvium	
Rosamond - Godde Ranch	34.827	118.265	24274	274	Alluvium	
Sage - Fire Station	33.580	116.931	12636	636	Shallow alluvium over granitic bedrock	59

TABLE 2
CSMIP Strong-Motion Stations (Continued)

Station Name	N.Lat.	W.Long.	Station No.	<u>Code</u>	Site <u>Geology</u>	Record on Page*
Salton City	33.280	115.984	11628	628	Deep alluvium	60
San Bernardino - 1-story Commercial Bldg.	34.098	117.293	23622	622	Deep alluvium	93
San Bernardino - 2nd & Arrowhead	34.103	117.289	23522	522	Deep alluvium	61
San Bernardino - 3-story Office Bldg.	34.065	117.289	23516	516	Deep alluvium	89
San Bernardino - 5-story CSUSB Library	34.183	117.323	23285	285	Deep alluvium	73
San Bernardino - 5-story Hospital	34.132	117.321	23634	634	Deep alluvium	85
San Bernardino - 6-story Hotel	34.065	117.279	23287	287	Deep alluvium	77
San Bernardino - 9-story Commercial Bldg.	34.104	117.292	23515	515	Deep alluvium	81
San Bernardino - E & Hospitality	34.065	117.292	23542	542	Deep alluvium	62
San Bernardino - I10/215 Interchange	34.064	117.296	23631	631	Deep alluvium	211
San Diego - 19-story Commercial Bldg.	32.718	117.160	03603	603	Alluvium	200
San Jacinto - Valley Cemetery	33.760	116.960	12202	202	Deep alluvium	58
San Marino - Southwestern Academy	34.115	118.130	24401	401	Deep alluvial fan	
San Pedro - Palos Verdes	33.722	118.309	14159	159	Sandstone	n t
Santa Monica - City Hall Grounds	34.011	118.490	24538	538	Alluvium	nt
Sawmill Mountain - Caltech Seismic Station	34.719	118.581	24082	082	Granitic bedrock	nt
Seal Beach - 8-story Office Bldg.	33.757	118.084	14578	578	Alluvium	113
Seal Beach - 8-story Office Bldg. Parking Lot	33.757	118.084	14578	578	Alluvium	63
Sherman Oaks - 13-story Commercial Bldg.	34.154	118.465	24322	322	Alluvium	nt
Silent Valley - Poppet Flat	33.851	116.852	12206	206	Weathered granite	65
Snow Creek	33.888	116.684	12630	630	Hard granitic bedrock (granodiorite)	64
Sylmar - 6-story County Hospital Parking Lot	34.326	118.444	24514	514	Alluvium	
Sylmar - 6-story County Hospital	34.326	118.444	24514	514	Alluvium	
Tarzana - Cedar Hill Nursery	34.160	118.534	24436	436	Shallow alluvium (10m) over siltstone	65

TABLE 2
CSMIP Strong-Motion Stations (Continued)

Station Name	N.Lat.	W.Long.	Station No.	Code	Site <u>Geology</u>	Record on Page*
Tehachapi - Valley Blvd & Curry St.	35.124	118.449	34487	487	Alluvium	nt
Temecula - 6th & Mercedes	33.496	117.149	13172	172	Alluvium	66
Twentynine Palms - Park Maint. Bldg.	34.021	116.009	22161	161	Weathered layer (1m) over granitic bedrock	nt
Van Nuys - 7-story Hotel	34.221	118.471	24386	386	Alluvium	203
Vasquez Rocks Park	34.490	118.320	24047	047	Alluvium (~3m) over	nt
Westmorland - Fire Station	33.037	115.623	11369	369	Alluvium	nt
Whittier - 8-story Hotel	33.975	118.036	14606	606	Shallow alluvium over sedimentary bedrock	206
Winchester - Bergman Ranch	33.640	117.094	13199	199	Weathered granitic bedrock	66
Winchester - Hidden Valley Farms	33.681	117.056	13200	200	Thin soil (1m) over schist and granitic roc	67 k
Winterhaven - Sheriff Substation	32.739	114.635	00022	022	Deep alluvium	nt
Wrightwood - Jackson Flat	34.381	117.737	23590	590	Hard metamorphic rock (schist)	
Wrightwood - Nielson Ranch	34.314	117.545	23573	573	alluvium	68
Wrightwood - Swarthout Valley	34.369	117.658	23574	574	Alluvium	69
Yermo - Fire Station	34.903	116.823	22074	074	Deep alluvium	67

Footnotes:

nt - Instrument not triggered, though operational

nt# - Instrument not triggered, probable instrument malfunction

nr1 - Instrument not operational due to construction in building

nr2 - No record; instrument out of media

TABLE 3 - CSMIP Strong-Motion Data - Big Bear Earthquake

					Mar	A social	4:	
Station	Station	Structure 1	Epicenter	Trigger	<u>wax.</u>	Acceler Grnd.		Record on
Name	No.	Type,Size*	Dist.**	Time#	Comp.		(g)	Pg.
								**
Big Bear Lake	22561	Instr.	11	05:32.1	270	0.51		33
Civic Center Grounds		shltr. H			Up	0.21		
					360	0.57		
Redlands	23481	7 otami otaal	26	05.07.6	100			
7-story Commercial	25461	7-story steel bldg.	36	05:37.6	180	0.11	0.18	101
Bldg.		(13 sensors)			Up	0.11		
Diag.		(13 sensors)			270	0.09	0.16	
Snow Creek	12630	Instr.	37	05:34.3	87	0.17		64
		shltr. H			Up	0.09		• •
					177	0.12		
D 11 1								
Redlands	23495	1-story concrete	39	05:38±	360	0.13	0.44	97
1-story Warehouse		titlt-up bldg.			Up	0.06		
		(12 sensors)			90	0.17	0.75	
Silent Valley	12206	Instr.	39	05:38.4	90	0.07		65
Poppet Flat	12,00	shltr. A	3,	05.50.4	Up	0.06		05
		222424 14			360	0.08		
					300	0.00		
Desert Hot Springs	12149	1-story	40	05:38.9	90	0.23		33
Fire Station		bldg.			Up	0.12		
					360	0.18		
San Bernardino	23522	Instr.	44	05:37.3	070	0.10		
2nd & Arrowhead	23322	shltr. H	44	03:37.3	270	0.12		61
Zild & Allowicad		siiti. Ii			Up 360	0.14 0.11		
					300	0.11		
San Bernardino	23515	9-story	44	05:39.1	180	0.08	0.20	81
9-story Commercial		steel bldg.			Up	0.04		
Bldg.		(13 sensors)			90	0.08	0.10	
0 D 1	2222							
San Bernardino	23287	6-story concrete	44		180	0.08	0.25	77
6-story Hotel		bldg.			Up	0.06		
		(9 sensors)			90	0.12	0.21	
San Bernardino	23622	1-story	45	05:25.6	180	0.06	0.17	93
1-story Commercial		concrete/URM		00.20.0	Up	0.09		,,,
Bldg.		bldg.(10 sensors)		90	0.06	0.11	
		-	,					
San Bernardino	23516	3-story steel	45	05:39.3	360	0.09	0.40	89
3-story Office Bldg.		bldg.			Up	0.06		
		(13 sensors)			270	0.13	0.28	
San Bernardino	23542	Instr.	46	05:36.8	270	0.09		62
E & Hospitality	23342	shltr. H	40	03,30.8	Up	0.09		02
E & Hospitality		эши. П			360	0.07		
					300	0.10		
San Bernardino	23285	5-story	46		215	0.07	0.14	73
5-story CSUSB Library		concrete bldg.			Up	0.08		
		(10 sensors)			125	0.08	0.34	

TABLE 3 - CSMIP Strong-Motion Data (Continued)

					Max.	Acceler	ation	
Station	Station	Structure I	Epicenter	Trigger		Grnd.	Struct.	Record on
Name	No.	Type,Size*	<u>Dist.</u> **		Comp.	(g)	(g)	Pg.
San Bernardino	23631	Curved concrete	46		T	0.11	1.02	211
I10/215 Interchange		bridge			Up	0.08	0.33	211
		(34 sensors)			L	0.09	0.58	
San Bernardino	23634	5-story steel	46	05:37.0	2	0.07	0.32	85
5-story Hospital		bldg.			Up	0.04		
		(12 sensors)			92	0.06	0.18	
Joshua Tree	22170	1-story	48	05:42.2	90	0.06		40
Fire Station		bldg.			Up	0.06		
					360	0.06		
Palm Springs	12299	4-story steel	48		360	0.08	0.19	105
4-story Hospital		bldg.			Up	0.06		
		(13 sensors)			270	0.06	0.18	
Colton	23540	1-story	49	05:39.9	5	0.04	0.14	125
1-story School Gym		tilt-up bldg.			Up	0.05		
		(13 sensors)			95		0.22	
Hesperia	23583	Instr.	50	05:37.4	90	0.06		39
4th & Palm		shltr. H			Up	0.04		
					180	0.10		
San Jacinto	12202	1-story	5 1	05:41.3	90	0.05		58
Valley Cemetery		bldg.			Up	0.04		
					360	0.07		
Palm Springs	12025	Instr.	51	05:40.8	90	0.09		53
Airport		shltr. A			Up	0.10		
					360	0.09		
Hemet	12267	4-story	52		315	0.06	0.14	129
4-story Hospital		concrete bldg.			Up	0.05		
		(10 sensors)			225	0.04	0.09	
Hemet	12266	1-story	52		360	0.06	0.15	127
1-story Library		bldg.			Up	0.09		
		(6 sensors)			270	0.07	0.21	
Hemet	12331	1-story	54	05:40.8	90	0.08		38
Stetson Ave Fire		bldg.			Up	0.09		
Station					360	0.12		
Riverside	13620	2-story concrete	56	05:27.2	305		0.14	197
2-story Govt. Office		bldg.			Up			
Bldg.		(12 sensors)			35		0.30	
Riverside	13312	13-story	56		30	0.06		
13-story Government		steel/concrete			Up	0.03		
Office Bldg.		(15 sensors)			120	0.05		

TABLE 3 - CSMIP Strong-Motion Data (Continued)

					Max.	Accele	ration	
Station Name	Station No.	Structure I Type, Size*	Epicenter <u>Dist.</u> **		Comp.	Grnd.		Record on <u>Pg.</u>
377' 1		_						<u></u>
Winchester	13200	Instr.	62	05:50.3	90	0.08		67
Hidden Valley Farms		shltr. A			Up	0.03		
					360	0.07		
Palm Desert	12284	4-story concrete	62		360	0.07	0.09	178
4-story Medical		bldg.			Up	0.04		
Office Bldg.		(9 sensors)			90	0.06	0.11	
Riverside	13123	1-story	64	05:43.4	270	0.05		58
Airport	10120	bldg.	04	05.45.4	Up	0.05		36
		0146.			180	0.05		
Etiwanda	23466	Steam gener-	66	05:43.6	180	0.03	0.10	225
Power Plant		ating plant			Up	0.03	0.10	
	,	(12 sensors)			90	0.05	0.08	
Winchester	13199	Instr.	67	05:43.4	90	0.08		66
Bergman Ranch		shltr. A			·Up	0.07		
					360	0.08		
****	22.55	- .						
Wrightwood	23573	Instr.	67	05:40.2	90	0.06		68
Nielson Ranch		shltr. H			Up	0.09		
					180	0.06		
Lake Mathews	13326	Earth dam	69	05:44.3	75	0.07	0.10	223
Dike 1		(9 sensors)			Up	0.05	0.06	
					345	0.07	0.11	
Rancho Cucamonga	23598	Instr.	69	05:41.6	90	0.05		57
Deer Canyon	23370	shltr. H	09	05.41.0	Up	0.03		37
Door Carryon		Sinti. II			180	0.02		
					160	0.04		
Sage	12636	1-story	70	05:40.3	90	0.18		59
Fire Station		bldg.			Up	0.13		
					180	0.17		
Rancho Cucamonga	23497	Instr.	70	05:43.2	360	0.04		112
Law & Justice Center		shltr. D			Up	0.04		
Parking Lot (Chns 17-19)					90	0.05		
		1						
Rancho Cucamonga	23497	4-story base-	70	05:43.2	360	0.04	0.07	109
Law and Justice Center		isolated bldg.			Up	0.04	0.04	
		(16 sensors)			90	0.06	0.07	
Phelan	23597	Instr.	70	05:41.3	90	0.04		55
Wilson Ranch Road		shltr. H			Up	0.03		
					180	0.06		
Lake Mathews	13313	Earth dam	71	05:44.9	350		0.09	222
Main Dam	13313	(6 sensors)	/1	UJ.74.7	Up		0.05	LLL
Main Dam		(O sensors)			260		0.03	
					200		0.00	

TABLE 3 - CSMIP Strong-Motion Data (Continued)

Station	Station		Epicenter		Max.	Accele Grnd		Record on
Name	<u>No.</u>	Type, Size*	<u>Dist.</u> **	Time#	Comp.	<u>(g)</u>	<u>(g)</u>	<u>Pg.</u>
Murrieta Hot Springs	13198	Instr.	73	05:45.4	90	0.07		46
Collins Ranch		shltr. A			Up	0.04		
					360	0.05		,
Mt. Baldy	23572	Instr.	77	05:43.1	90	0.05		50
Elementary School		shltr. H	• •	00.43.1	Up	0.03		30
			•		180	0.04		
Yermo	22074	1-story	78		360	0.06		67
Fire Station		bldg.	, 0		Up	0.05		07
		J			270	0.04		
Indio	12543	Instr.	78	05:43.1	95	0.07		41
Riverside Co.		shltr. H	,,	00145.1	Up	0.06		41
Fairgrounds					185	0.07		
Barstow	23559	Instr.	79	05:45.0	90	0.05		34
Vineyard & H St.		shltr. H	• • •	0511510	Up	0.03		34
•					360.	0.03		

Wrightwood	23574	Instr.	79	05:42.0	90	0.08		69
Swarthout Valley		shltr. H			Up	0.07		
					180	0.08		
Lake Cahuilla	12624	Instr.	81	05:45.2	94	0.04		42
		shltr. H			Up	0.03		
					184	0.04		
Indio	12026	Instr.	82	05:47.7	90	0.05		40
Coachella Canal		shltr. A			Up	0.04		
					360	0.06		
Temecula	13172	Instr.	84	05:46.9	90	0.05		66
6th & Mercedes		shltr. H			Up	0.03		00
					360	0.04		
Wrightwood	23590	Instr.	86	05:43.7	90	0.02		
Jackson Flat		shltr. H		0011011	Up	0.02		
					180	0.02		
Pomona	23525	Instr.	87	05:45.8	90	0.03		56
4th & Locust		shltr. H		0011010	Up	0.03		30
					360	0.03		
Pomona	23511	2-story	87	05:45.9	360	0.02	0.06	192
2-story Commercial	20011	concrete bldg.	5,	30.70.7	Up	0.02		174
Bldg.		(10 sensors)			270	0.03	0.08	
-		,						
Pomona	23544	6-story	87	05:45.9	270	0.03	0.13	194
6-story Commercial		concrete/URM	`		Up	0.02	0.10	
Bldg.		bldg.(12 sensors))		180	0.03	0.10	

TABLE 3 - CSMIP Strong-Motion Data (Continued)

					Max.	Accele	ration	
Station	Station	Structure	Epicenter	Trigger	2720076	Grnd.		Record on
Name	No.	Type,Size*	<u>Dist.</u> **	Time#	Comp.	(g)	<u>(g)</u>	<u>Pg.</u>
Featherly Park	13122	1-story	90		90	0.03		38
Park Maint. Bldg.		bldg.			Up	0.03		20
					360	0.04		
Big Dalton Reservoir	23247	Concrete dam	91	05:51.3	20		0.04	
Big Dalton Dam		(9 sensors)			Up		0.02	
					110		0.03	
Puddingstone Reservoir	23328	Earth dam	91	05:47.5	333	0.02		
Puddingstone Dam		(15 sensors)			Up	0.02		
					243	0.03		
Palmdale	23585	Instr.	93	05:50.1	90	0.02		
Black Butte		shltr. H			Up	0.01		
					180	0.03		
Palomar Mountain	12330	Seismic	94	05:49.1	90	0.02		
Palomar Observatory		vault .			Up	0.03		
		i			360	0.03		
Puerta La Cruz	12168	1-story	98	05:48.3	90	0.07		56
USFS Storage Bldg.		bldg.			Up	0.05		
					360	0.07		
Pearblossom	23584	Instr.	104	05:47.0	90	0.04		54
Pallet Creek		shltr. H			Up	0.02		
					180	0.03		
Cogswell Reservoir	23210	Earth dam	105	05:49.3	155	0.03	0.07	219
Cogswell Dam		(9 sensors)			Up	0.02	0.05	
					65	0.04	0.10	
Mecca	11625	Instr.	105	05:47.7	90	0.07		49
CVWD Yard		shltr. H			Up	0.03		
					180	0.07		
Amboy	21081	1-story	107	05:53.9	90	0.05		34
		bldg.			Up	0.03		
					360	0.05		
Desert Shores	12626	Instr.	111		90	0.05		36
		shltr. H			Up	0.03		
					180	0.05		
Littlerock	23595	Instr.	111	05:48.6	90	0.02		
Brainard Canyon		shltr. H			Up	0.02		
					180	0.02		
Whittier	14606	8-story reinf.	114	05:49.2	360	0.04	0.10	206
8-story Hotel		masonry bldg.			Up	0.03		
		(12 sensors)			90	0.03	0.11	

TABLE 3 - CSMIP Strong-Motion Data (Continued)

					Max.	Acceler	ation	
Station	Station	Structure E	Epicenter	Trigger		Grnd.	Struct.	Record on
Name	No.	Type,Size*	<u>Dist.</u> **	Time#	Comp.	<u>(g)</u>	<u>(g)</u>	Pg.
North Shore	11613	Instr.	115	05:49.4	90	0.09		52
Salton Sea State		shltr. H			Up	0.04		32
Park HQ					180	0.08		
Boron	33083	1-story	116		90	0.04		35
Fire Station		bldg.			Up	0.03		
				•	360	0.03		
Newport Beach	13160	1-story	118		90	0.06		53
Irvine Ave. Fire		bldg.			Up	0.02		
Station					360	0.04		
Fort Irwin	24577	Instr.	119	05:52.8	90	0.02		
		shltr. H			Up	0.02		
					360	0.02		
Newport Beach	13589	11-story	121	05:51.8	335	0.06	0.13	175
11-story Hospital		concrete bldg.			Up	0.03	0.03	
•		(18 sensors)			65	0.04	0.16	
San Marino	24401	1-story	121	05:53.3	90	0.03		
Southwestern Academy		bldg.			Up	0.02		
					360	0.03		
Pasadena	24571	9-story	122	05:51.5	90	0.04	0.05	183
9-story Commercial		concrete bldg.			Up			
Bldg.		(15 sensors)			180		0.10	
Pasadena	24546	12-story steel	122	05:50.3	360		0.06	186
12-story Commercial/		bldg.			Up			
Office Bldg.		(15 sensors)			270		0.07	
Pasadena	24541	6-story	122	05:52.1	90	0.05	0.05	180
6-story Office Bldg.		steel/URM			Up	0.03		•
		bldg.(16 sensors))		360	0.03	0.06	
Pasadena	24566	12-story	122	05:50.4	180	0.04	0.06	189
12-story Office Bldg.		steel bldg.			Up	0.06		
		(15 sensors)			270	0.05	0.16	
Alhambra	24461	1-story	123	06:10.8	90	0.03		
Fremont School		bldg.			Up	0.01		
					360	0.02		
Los Angeles	24468	8-story	125		180	0.03	0.06	147
8-story CSULA Admin.		concrete bldg.			Up	0.02	0.04	
Bldg.		(16 sensors)			90	0.02	0.03	
Los Angeles	24592	Instr.	125	05:50.5	90	0.04		45
City Terrace		shltr. H			Up	0.03		
					180	0.06		

TABLE 3 - CSMIP Strong-Motion Data (Continued)

					Max.	Max. Acceleration		
Station	Station	Structure]	Epicenter	Trigger		Grnd.		Record on
Name	No.	Type,Size*	<u>Dist.</u> **	Time#	Comp.	<u>(g)</u>	<u>(g)</u>	<u>Pg.</u>
Los Angeles	24580	2-story isolated	125	05:50.9	40	0.05	0.05	139
2-story Fire Command		steel bldg.			Up	0.03	0.05	
Control Bldg.		(16 sensors)			310	0.04	0.04	
Control Bidg.		(10 sensors)			310	0.04	0.04	
Los Angeles	24400	1-story	126	06:05.2	90	0.04		46
Obregon Park		bldg.			Up	0.02		
					360	0.04		
Seal Beach	14578	8-story isolated	126		90	0.04	0.06	113
8-story Office Bldg.		concrete bldg.			Up	0.02	0.07	
, ,		(28 sensors)			360	0.04	0.08	
Seal Beach	14578	Instr.	126		90	0.04		63
8-story Office Bldg.		shltr. H			Up	0.02		
Parking Lot					360	0.04		
North Shore	11591	Instr.	127	05:51.2	90	0.05		51
Durmid		shltr. H			Up	0.04		
					180	0.06		
Los Angeles	24605	Instr.	127		5	0.06		48
University Hospital		shltr. D			Up	0.02		
Free Field					95	0.03		
Palmdale	24232	4-story reinf.	127		140	0.03	0.06	
4-story Hotel		masonry bldg.			Up	0.01	0.02	
,		(9 sensors)			50	0.03	0.04	4
Palmdale	24521	Instr.	127	05:51.8	272	0.02		
Hwy 14 & Palmdale Blvd		shltr. H			Up	0.01		
,					2	0.03		
Los Angeles	24605	7-story isolated	127		5	0.05	0.06	142
7-story University		steel bldg.			Up	0.02	0.02	
Hospital		(24 sensors)			95	0.02	0.06	
Downey	14368	1-story	128		90	0.05		35
County Maint. Bldg.		bldg.			Up	0.02		
		.			360	0.04		
Salton City	11628	Instr.	129	05:51.4	90	0.09		60
241021 010)		shltr. H			Up	0.03		
					180	0.05		
Long Beach	14241	Instr.	130	05:59.4	90	0.03		
Recreation Park	_	shltr. H			Up	0.01		
TAAN AMILAN T MIT					360	0.02		
Los Angeles	24611	Instr.	132	05:52.8	90	0.02		47
Temple & Hope		shltr. H			Up	0.02		
Temple & Hope					180	0.04		

TABLE 3 - CSMIP Strong-Motion Data (Continued)

					Max.	Acceler	ation	
Station	Station	Structure	Epicenter	Trigger		Grnd.		Record on
Name	<u>No.</u>	Type,Size*	<u>Dist.</u> **	Time#	Comp.	<u>(g)</u>	<u>(g)</u>	Pg.
Los Angeles	24601	17-story	132	05:52.3	220	0.03	0.13	162
17-story Residential		concrete bldg.			Up	0.02		102
Bldg.		(14 sensors)			130	0.04	0.17	
Los Angeles	24569	15-story	132	05:52.1	43	0.03	0.06	159
15-story Government		steel bldg.			Up	0.01		
Office Bldg.		(15 sensors)			313	0.02	0.05	
Long Beach	14242	Total	400					
Rancho Los Cerritos	14242	Instr.	133		90	0.03		43
Raicho Los Cerritos		shltr. H			Up	0.02		
					360	0.02		
Anaverde Valley	24576	Instr.	133	05:51.6	90	0.01		
City Ranch	2.070	shltr. H	133	05.51.0		0.01		
		Sinti. II			Up 180	0.01		
					100	0.02		
Los Angeles	24602	52-story	133	05:52.0	355	0.03	0.10	165
52-story Office Bldg.		steel bldg.	100	05.52.0	Up	0.03		103
		(20 sensors)			85	0.01	0.10	
		(======,			05	0.05	0.10	
Los Angeles	24581	12-story	133	05:52.5	40	0.03	0.06	153
12-story Commercial/Office	•	concrete/URM			Up	0.02		
Bldg.		bldg. (16 sensor	s)		130	0.03	0.04	
T - A 1		- .						
Los Angeles	24629	54-story	133	05:51.8	40	0.03	0.07	170
54-story Office		steel bldg.			Up	0.02		
Bldg.		(20 sensors)			130	0.03	0.06	
Lancaster	24517	3-story reinf.	134	05:56.2	115	0.02	0.00	100
3-story Office Bldg.	24317	masonry bldg.	134	03:36.2	115	0.03	0.09	133
s story critico Blag.		(13 sensors)			Up 25	0.02	0.02	
		(15 schsols)			23	0.03	0.03	
Los Angeles	24579	9-story	134	05:52.5	40	0.03	0.18	150
9-story Office Bldg.		concrete/URM		32,02,0	Up	0.02		150
		bldg. (18 sensor	s)		310	0.03	0.16	
		(======================================	-,			0.05	0.10	
Lancaster	24609	5-story	134	05:53.2	25	0.03	0.09	130
5-story Hospital		steel bldg.			Up	0.01		
		(12 sensors)			295	0.03	0.15	
Los Angeles	24612	Instr.	134	05:53.2	90	0.02		
Pico & Sentous		shltr. H			Up	0.01		
					180	0.02		
Long Beach	14522	15 atam-	125	05.50.7	125	0.00	0.00	
Long Beach 15-story Government	14533	15-story	135	05:59.7	135	0.02	0.02	
-		steel bldg.			Up	0.01	0.02	
Office Bldg.		(16 sensors)			45	0.02	0.03	
Long Beach	14560	Instr.	135	06:01.5	90	0.02		
City Hall Grounds	- 1000	shltr. H	133	00.01.0	Up	0.02		_ _
					360	0.02		
					550	3.52		

TABLE 3 - CSMIP Strong-Motion Data (Continued)

Station	Station	Structure	Epicenter	Trigger	Max.	Acceler Grnd.		Record on
Name	<u>No.</u>	Type,Size*	<u>Dist.</u> **	Time#	Comp.	(g)	<u>(g)</u>	Pg.
Los Angeles 116th St. School	14403	1-story bldg.	136	05:55.9	90	0.03		
Jacob Solidor		oldg.			Up 360	0.02 0.03		
Long Beach 7-story Office Bldg.	14323	7-story steel bldg.	136	06:13.2	90 Up	0.02 0.01	0.06	134
		(18 sensors)			360	0.02	0.07	
Burbank 6-story Commercial	24370	6-story steel Bldg.	137		135	0.04	0.07	119
Bldg.		(13 sensors)			Up 45	0.01 0.02	0.11	
Burbank 10-story Residential	24385	10-story concrete bldg.	137		45 Up	0.02 0.01	0.07	122
Bldg.		(16 sensors)			315	0.01	0.10	
Leona Valley #5 Ritter Ranch	24055	Instr. shltr. H	137	06:00.3	90	0.03 0.02		43
		Sinti. 11			Up 360	0.02		
Leona Valley #4	24308	Instr.	137	06:19.5	90	0.02		
		shltr. H			Up 360	0.01 0.02		
Baker Fire Station	32075	1-story	138	06:14.6	140	0.04		
rife Station		bldg.			Up 50	0.02 0.02		
Inglewood Union Oil Yard	14196	Instr.	138	06:00.6	90	0.03		
Onion On Tard		shltr. A			Up 360	0.02 0.03		
Los Angeles	24236	14-story	140		90	0.03	0.08	156
Hollywood Storage Bldg.		concrete bldg. (12 sensors)			Up 360	0.02 0.03	0.09	
Los Angeles	24303	Instr.	140	05:57.2	90	0.03		44
Hollywood Storage Bldg. FF		shltr. H			Up 360	0.01 0.03		
Lancaster Fox Airfield	24474	Control Tower	141	05:56.1	60	0.02	0.06	227
Airport Control Tower		(9 sensors)			Up 330	0.02 0.02	0.09	
Lancaster For AirFold	24475	Instr.	141	05:56.5	90	0.02		
Fox Airfield Grounds		shltr. H			Up 360	0.01 0.03		
Pacoima	24088	1-story	143	05:56.6	90	0.03		
Kagel Canyon Fire Sta. #74		bldg.			Up 360	0.02 0.02		

TABLE 3 - CSMIP Strong-Motion Data (Continued)

					Max.	Acceler	ration	
Station Name	Station No.	Structure	Epicenter			Grnd.	Struct.	Record on
114110		Type,Size*	<u>Dist.</u> **	Time#	Comp.	<u>(g)</u>	<u>(g)</u>	<u>Pg.</u>
Los Angeles	24157	Instr.	143	05:57.1	90	0.04		44
Baldwin Hills		shltr. A			Up	0.02		
					360	0.04		
Rosamond	24092	1-story	147		90	0.02		
Airport		bldg.	247		Up	0.02		
					360	0.02		
Mojave	24269	Instr.	148	06:15.5	90	0.03		
Hwy 14 & Backus Rd	2,202	shltr. H	140	00.15.5	Up	0.03		
•		51111111111			360	0.01		
					300	0.04		
Arleta	24087	1-story	149		90	0.02		
Nordhoff Ave Fire Sta.		bldg.			Up	0.02		
					360	0.02		
Rosamond	24274	Instr.	149	06:24.6	90	0.02		
Godde Ranch		shltr. H			Up	0.02		
					360	0.02		
Sylmar	24514	Small 1-story	150	05:57.2	356	0.04		
6-story County Hospital	2.514	bldg.	150	03.37.2	Up	0.04		
Parking Lot		0. 45 .			86	0.02		
Sylmar	24514	6-story steel/	150		356	0.02	0.05	
6-story County Hospital	24514	concrete bldg.	150		Up	0.02		
		(13 sensors)			86	0.02	0.05	
Van Nuys	24386	7 stom	150		260	0.00	0.06	202
7-story Hotel	24360	7-story	152		360	0.02	0.06	203
7-story froter		concrete bldg. (16 sensors)			Up	0.01		
		(10 sensors)			270	0.03	0.06	
Elizabeth Lake	24575	Instr.	152	05:55.4	90	0.03		37
		shltr. H			Up	0.01		
					180	0.03		
Lake Hughes #1	24271	1-story	156	06:06.1	90	0.02		
Fire Station #78		bldg.			Up	0.01		
					360	0.02		
Tarzana	24436	Instr.	157	06:00.8	90	0.03		65
Cedar Hill Nursery		shltr. H			Up	0.01		
•					360	0.05		
Lake Hughes 12A	24607	Instr.	165	06:17.4	90	0.01		
	21307	shltr. H	103	30.17.4	Up	0.01		
		omer, 11			180	0.01		
0 D:	00600	10		06.04.				
San Diego	03603	19-story steel	168	06:01.4	90	0.02	0.05	200
19-story Commercial		bldg.			Up	0.01	0.07	
Bldg.		(16 sensors)			360	0.02	0.07	

TABLE 3 - CSMIP Strong-Motion Data (Continued)

		_			Max. Acceleration			
Station	Station	Structure	Epicenter	66			Struct.	
Name	No.	Type,Size*	<u>Dist.</u> **	Time#	Comp.	<u>(g)</u>	<u>(g)</u>	<u>Pg.</u>
Neenach	24586	Instr.	173	05:59.0	90	0.02		
Sacatara Creek		shltr. H			Up	0.02		
					180	0.02		
Lake Piru Santa Felicia Dam	24280	Earth dam	180	06:03.1	90	0.04		
		(6 sensors)			Up	0.02		
					360	0.02		

Footnotes:

Instr. shltr. A - small prefabricated metal building

Instr. shltr. D - small metal box

Instr. shltr. H - small fiberglass shelter

^{* -} Instrument shelter types:

^{** -} Distance (in km) relative to the presently estimated (USGS, CIT) epicenter at 34.201N, 116.826W.

^{# -} Accelerograph trigger time, when present, is in minutes and seconds after 15:00:00 UTC on 28 June 1992.

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RECORD 22561-D0302-92181.009

Big Bear Lake — Civic Center Grounds (CSMIP Station 22561)

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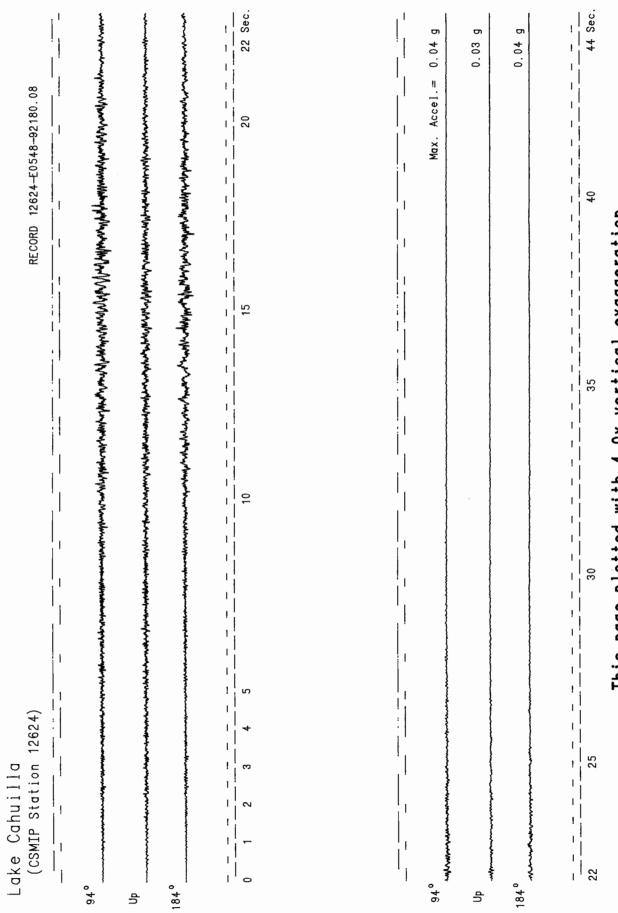
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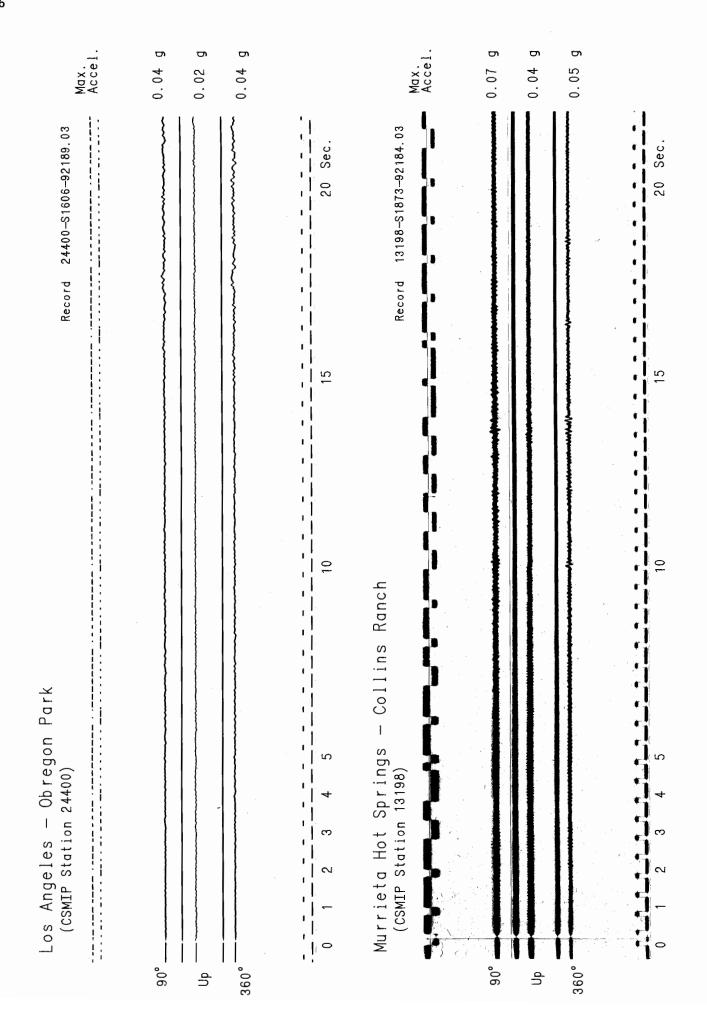


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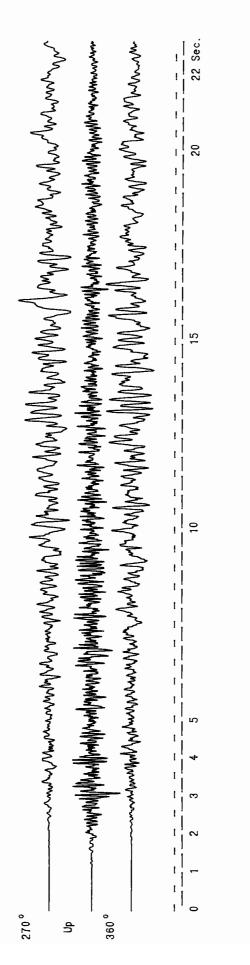
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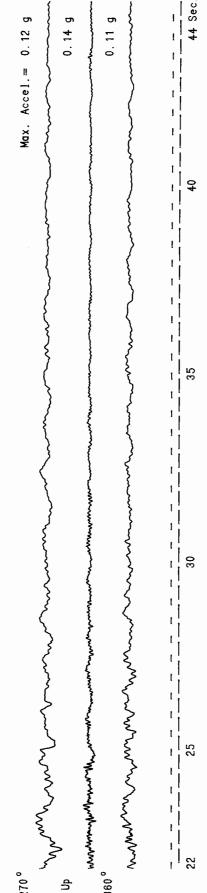
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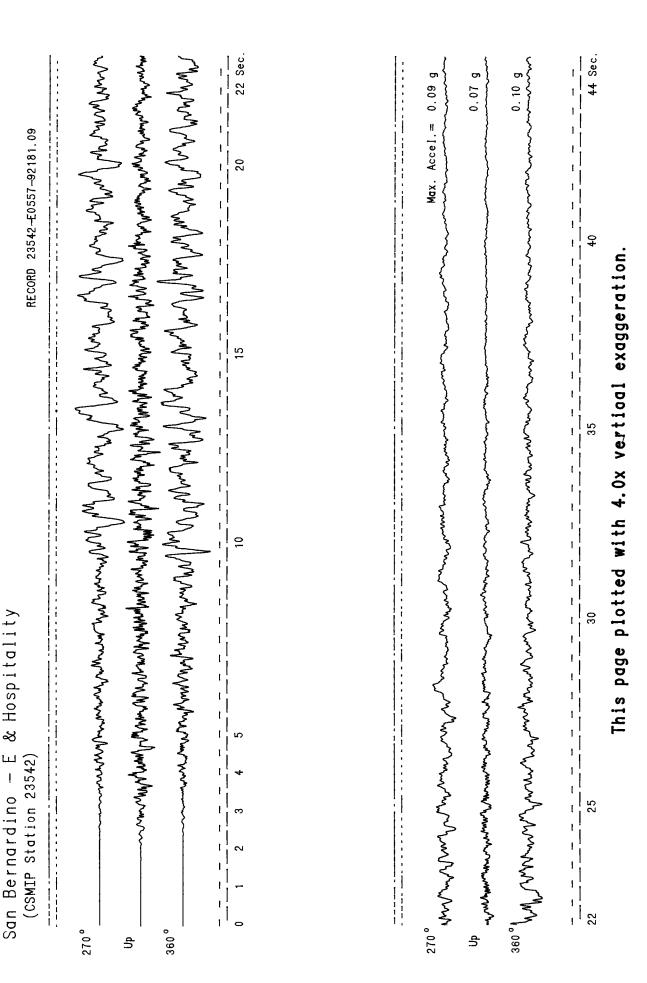
San Bernardino — 2nd & Arrowhead (csMIP Station 23522)

RECORD 23522-D0267-92182.04





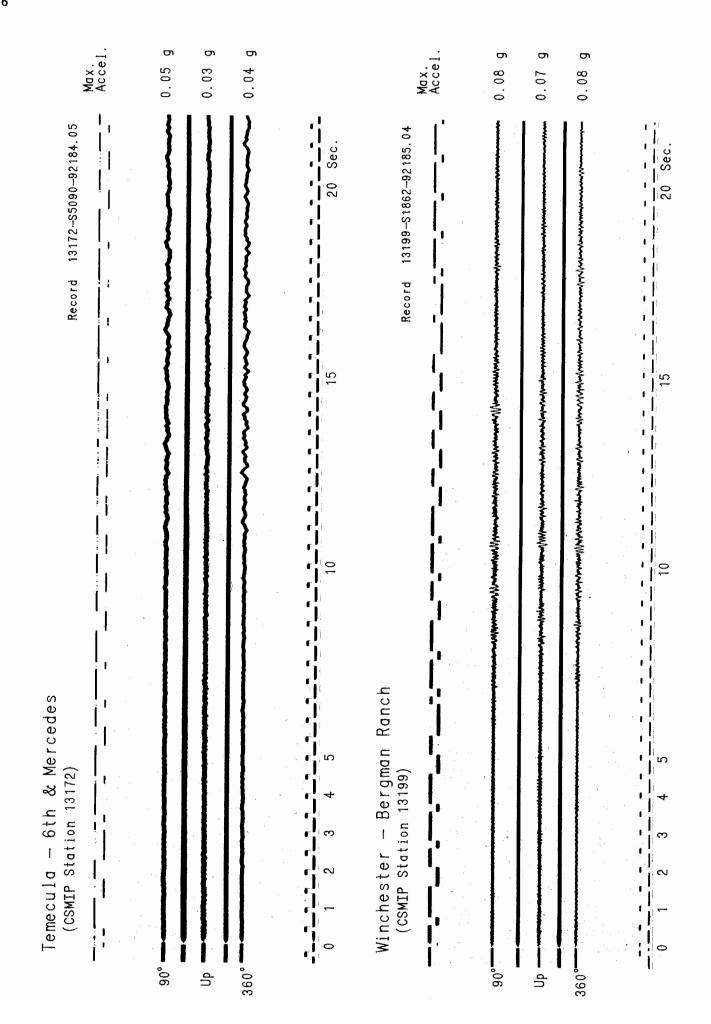
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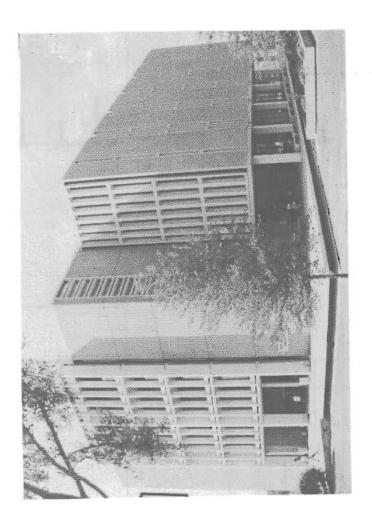
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San Bernardino - 5-story CSUSB Library (CSMIP Station No. 23285)



No. of Stories above/below ground: 5/1 Base Dimensions: 261' x 136' Plan Shape: Rectangular

Typical Floor Dimensions: 204' x 136' Design Date: 1968

Construction Date: 1969-70

9" concrete slabs supported by concrete Vertical Load Carrying System: columns.

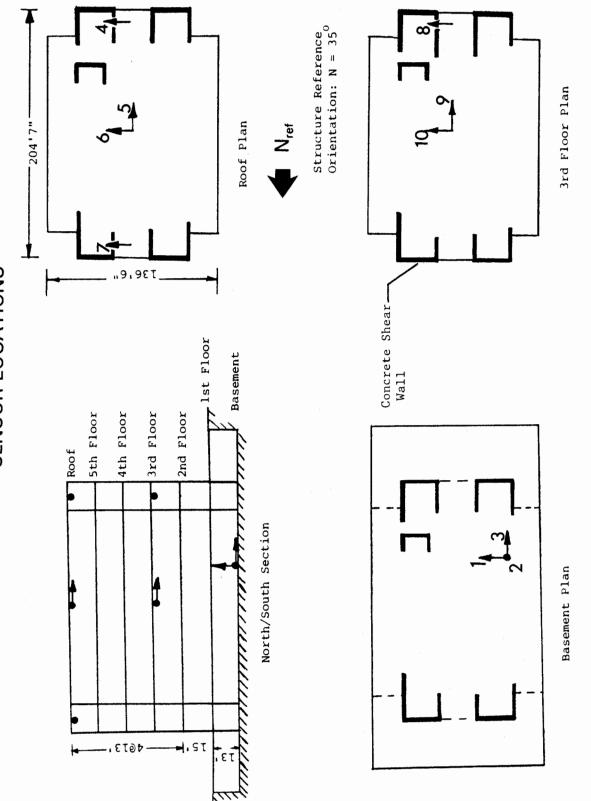
Lateral Force Resisting System: Concrete shear walls in both directions, at each corner of the building.

Spread footings. Foundation Type:

2 3

San Bernardino - 5-story CSUSB Library (CSMIP Station No. 23285)

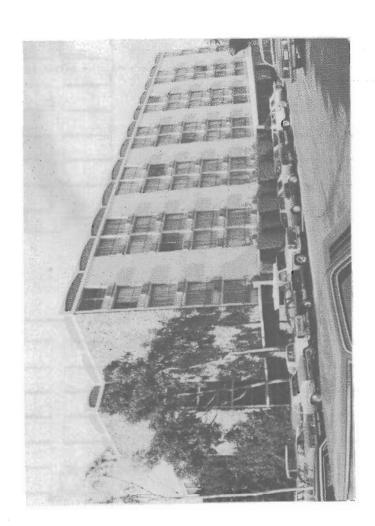




ino - 5-Story CSUSB Library (station No. 23285)	Basement - E Max. Accel. = 0.08	$d_{\Pi} =$		South Wall - E	Center - S Lenter - S Lenter - S	Center - E	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Floor: South Wall - E	Center - S Which merchange (MA) May Which was the Mark Washington Mark Wash Mark Wash Mark Wash Mark Washington Mark Wash	Center - E	Structure Reference Orientation: N=35°	2 3 4 5 10 15 20
5-Story CSUSB Librar on No. 23285)		ووعين وإدروا أردوا والمردون والموادوات والمرادون والمرادون والمردوا	***************************************	Wall - E	- S		North Wall - E	South Wall - E	- S	M)		

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San Bernardino - 6-story Hotel (CSMIP Station No. 23287)



No. of Stories above/below ground: 6/0 Plan Shape: Rectangular Base Dimensions: 58' x 172' Typical Floor Dimensions: 58' x 172' Design Date: 1970 Construction Date: 1971±

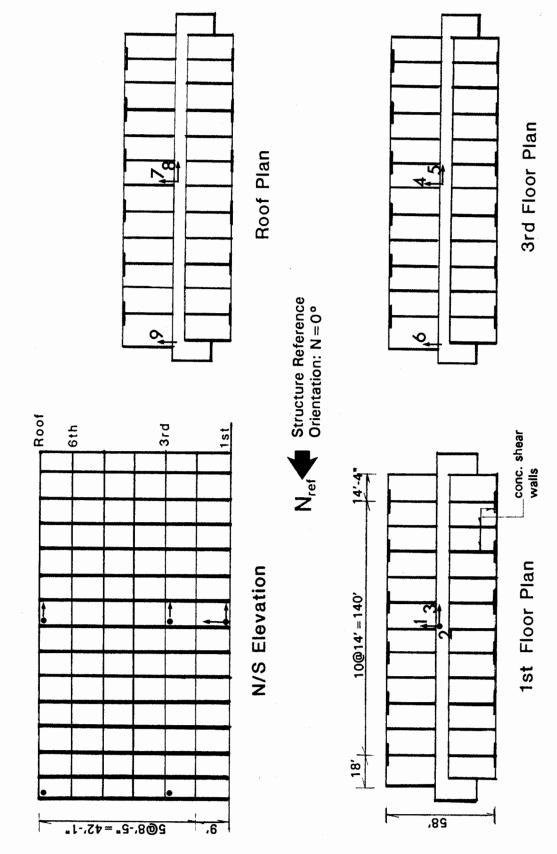
Vertical Load Carrying System:
5.5" and 7.5" precast concrete floor panels
supported on 8" and 9" concrete walls.

Lateral Force Resisting System:
Multiple concrete shear walls, 8" in the
transverse direction and, 9" exterior walls
with window openings in the longitudinal
direction.

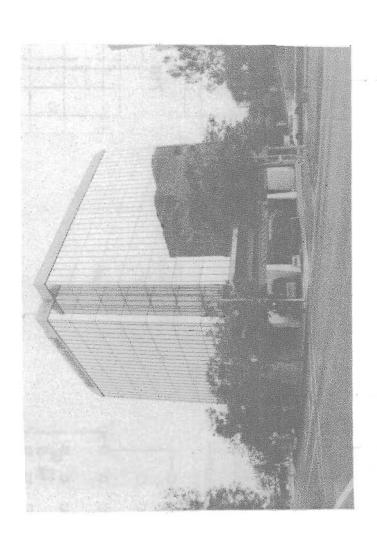
Foundation Type: Continuous spread footings under each wall.

San Bernardino - 6-story Hotel (CSMIP Station No. 23287)

SENSOR LOCATIONS



San Bernardino - 9-story Commercial Bldg. (CSMIP Station No. 23515)



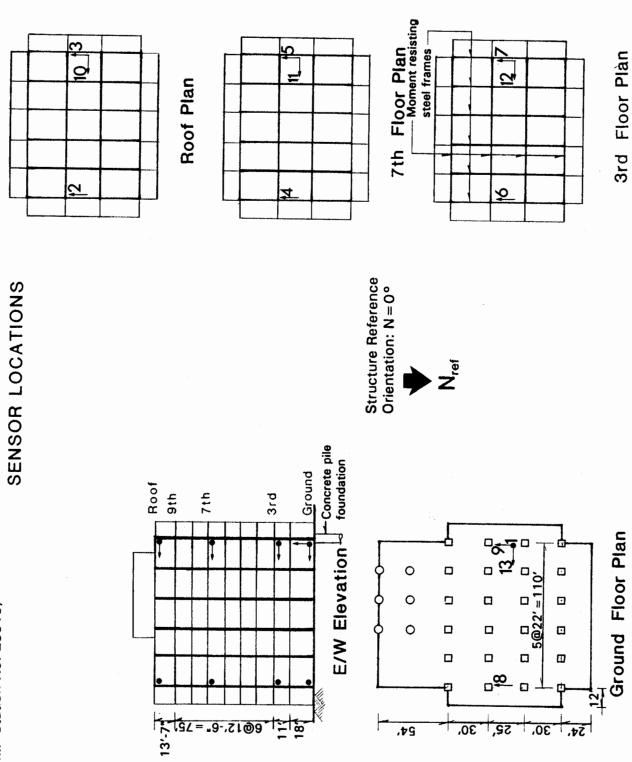
No. of Stories above/below ground: 9/0 Plan Shape: Rectangular Base Dimensions: 134' x 163' Typical Floor Dimensions: 134' x 110' Design Date: 1974

Construction Date: 1975

Vertical Load Carrying System:
Concrete slabs on metal decks supported by steel beams and columns.
Lateral Force Resisting System:
Distributed moment resisting steel frames.
Foundation Type:

Cast-in-place concrete piles.

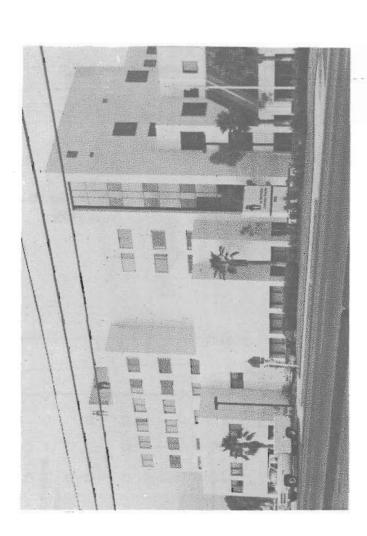
San Bernardino - 9-story Commercial Bldg. (CSMIP Station No. 23515)



Record 23515-C0278-92181.04										N=0°	15 22 Sec.
cial Bldg.										Structure Reference Orientation:	
San Bernardino - 9-story Commercial (CSMIP Station 23515)	1. Ground Floor: West End - Up	2 Roof: East End - S	3 " West End - S 4 /th Floor: East End - S	5 " West End - S 6 3rd Floor: East End - S	7 " West End - S 8 Ground Floor: East End - S	End –	10 Roof - E	3rd Floor -	13 Ground Floor - E		0 1 2 3 4 5

San Bernardino - 9-story Commercial Bldg. (CSMIP Station 23515)	Record 23515-C0278-92181.04
	Max Accel. = 0.04 g
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13	0.08 g
. 22	

San Bernardino - 5-story Hospital (CSMIP Station No. 23634)



No. of Stories above/below ground; 5/0 Base Dimensions: 181' x 174' Plan Shape: Irregular

Vertical Load Carrying System:

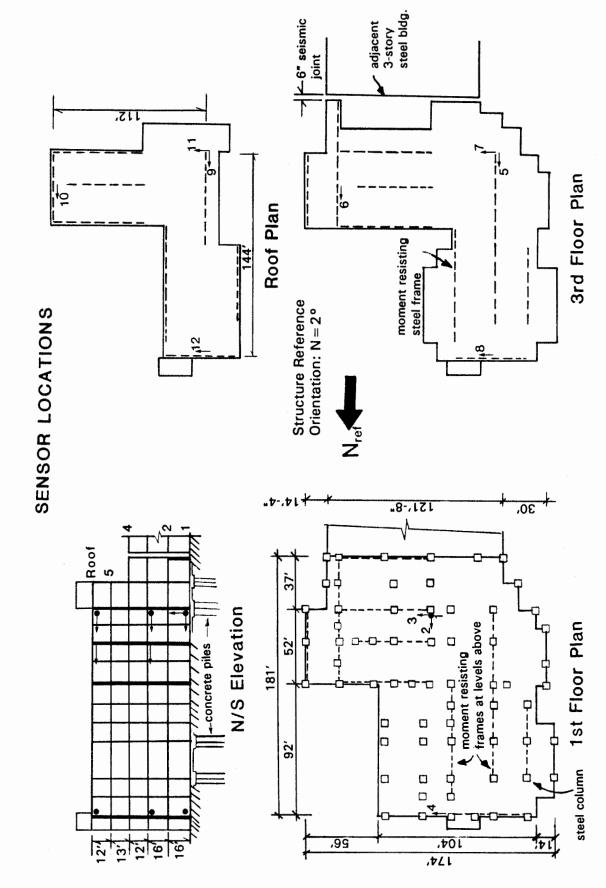
Typical Floor Dimensions: 162' x 130'

Construction Date: 1989 Design Date: 1986

supported by steel frames. Exterior wall is Multiple ductile moment resisting steel 3.25" concrete slabs over metal decks stucco on steel studs attached to steel Lateral Force Resisting System: frames in both directions. frames.

Cast-in-place concrete friction piles. Foundation Type:

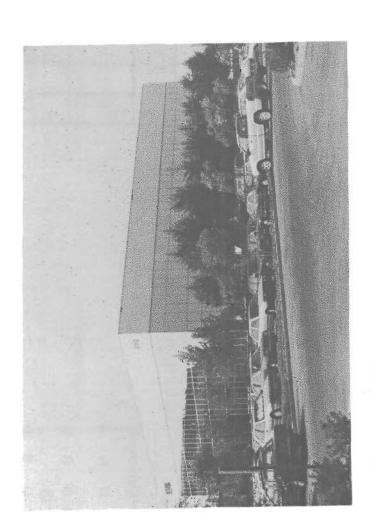
San Bernardino - 5-story Hospital (CSMIP Station No. 23634)



S	San Bernardino — 5—story Hospital (CSMIP Station 23634)	RECORD 23634—CS126—92181.14
12	Roof, North Wall - E	
1	Roof, SW Corner - E	
œ	3rd Floor, North Wall - E	
7	3rd Floor, SW Corner - E	
4	1st Floor, North Wall - E	
က	1st Floor, South Side - E	
10	Roof, East Wall - N	www.hvw.hvw.hvw.hy/\/\/\/\/\
တ	Roof, SW Corner - N	W/VW/W/W/W/W/W/W/W/W/W/W/W/W/W/W/W/W/W/
9	3rd Floor, East Wall - N	
5	3rd Floor, SW Corner - N	
2	1st Floor, South Side - N	
-	1st Floor, South Side - Up	
	Structure Reference Orientation: N=2°	
	0 1 2 3 4 5 10	15 20 22 Sec.

San Bernardino — 5—story Hospi (CSMIP Station 23634)	i ta l	RECORD 236	RECORD 23634—CS126—92181.14
			Max. Accel.= 0.18 g
11			0.17 g
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7 ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			0.10 g
4			0.06 g
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			0.24 g
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			0.04 g
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22 25	30	35 +0	

San Bernardino - 3-story Office Bldg. (CSMIP Station No. 23516)



No. of Stories above/below ground: 3/0 Plan Shape: Rectangular

Base Dimensions: 144' x 132'
Typical Floor Dimensions: 144' x 132'

Design Date: 1983

Construction Date: 1984

Vertical Load Carrying System:

1.5" concrete overlay on plywood and trussjoists supported on steel beams and timber beams.

Lateral Force Resisting System:

Perimeter moment resisting steel frames and plywood floor diaphragms with concrete overlay.

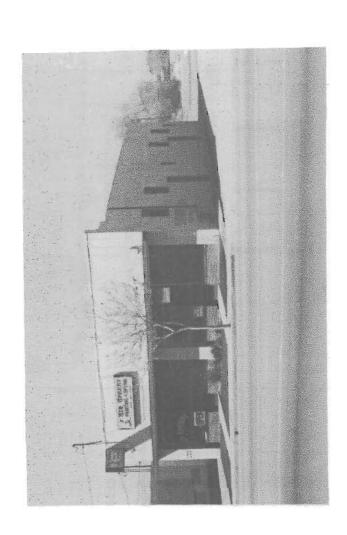
Foundation Type: Spread footings.

à Ó ά 3rd Floor Plan 2nd Floor Plan **Roof Plan** 2 4 1= Ç SENSOR LOCATIONS Structure Reference Orientation: $N = 0^{\circ}$ Perimeter moment resisting steel frames -steel column (typ) San Bernardino - 3-story Office Bldg. (CSMIP Station No. 23516) Ground Level Plan S/N Elevation ღ □ 6@24' = 144'12.72 15.62 13, 24, 3@28, = 84,

Record 23516-C0277-92182.05

	1 Ground Floor: Center - Up	2 Roof: South Wall - W W W W W W W W W W W W W W W W W W	North Wall - W	4 std floor: South Wall & Character Court Mark & Character Charact	5 " " Center - Wowwww WWW WWW WWW WWW W 25 B	6 " North Wall - Worth Wall - W	7 2nd Floor: South Wall - Wormman Control of South Wall - Worm	8 "North Wall - When when he was the state of the state o	9 Ground Floor: Center - W	10 Roof: South Wall - Nowwood Word // // Word // // Wall - Nowwood / 32 &	11 3rd Floor: South Wall North Wall Of North	12 2nd Floor: South Wall - N	13 Ground Floor: Center - N	Structure Reference Orientation: N=0°	0 1 2 3 4 5 10 10 2 2 Sec.
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San Bernardino - 1-story Commercial Bldg. (CSMIP Station No. 23622)

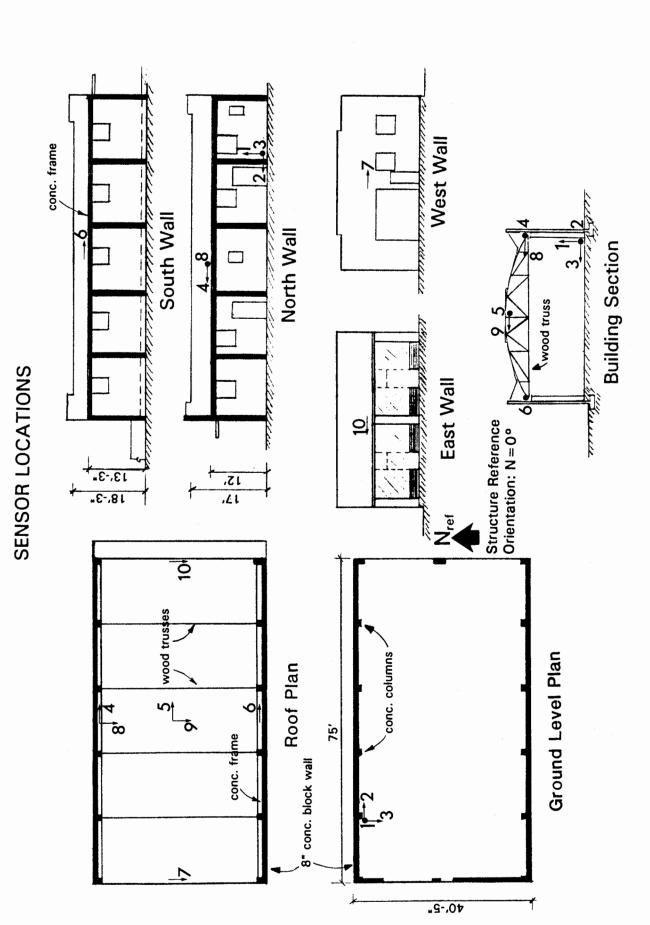


No. of Stories above/below ground: 1/0 Plan Shape: Rectangular Base Dimensions: 75' x 41'
Typical Floor Dimensions: 75' x 41'
Design Date: Unknown
Construction Date: 1950±

Vertical Load Carrying System:
Straight wood sheathing, wood joists and trusses supported by concrete columns.
Lateral Force Resisting System:
Unreinforced masonry concrete block walls in the longitudinal direction and concrete columns in the transverse direction.

Foundation Type: Spread footings under columns and walls.

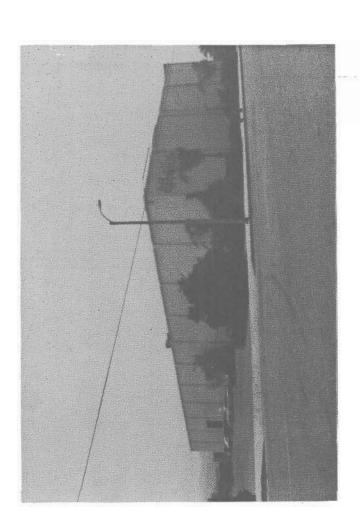
San Bernardino - 1-story Commercial Bldg. (CSMIP Station No. 23622)



RECORD 23622-CS124-92181,12		something the second se		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			~WARANAMANAMANAMANAMANAMANAMANAMANAMANAMAN			ייקאיילקייריימיינאייניירייין ייניין אוינאקאיינאן אינאייניין אוינאין אוינאיין איינאיין איינאיין איינאיין איינאיי		20 22 Sec.
	*			\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			Andrown-Mapp-MpAcomunication				ation: N=0°	15
/ Commercial Bldg.											Structure Reference Orientation:	10
San Bernardino — 1—story <u>(csMIP station 23622)</u>	7 Roof, West Wall - S	8 Roof, North Wall - S	9 Roof, Center - S	10 Roof, East Wall - S	3 Ground Floor, North Wall - S	4 Roof, North Wall E	5 Roof, Center - E	6 Roof, South Wall - E	2 Ground Floor, North Wall - E	1 Ground Floor, North Wall — Up	! ! ! ! ! !	1 2 3 4 5

San Bernar (CSMIP_Sta	San Bernardino — 1—story Comme (CSMIP Station 23622)	rcial Bldg.	RECORD 236	RECORD 23622-CS124-92181,12
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3 mm//mm				0 · 07 · g
4 Smootherway				0.07 9
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Redlands - 1-story Warehouse (CSMIP Station No. 23495)



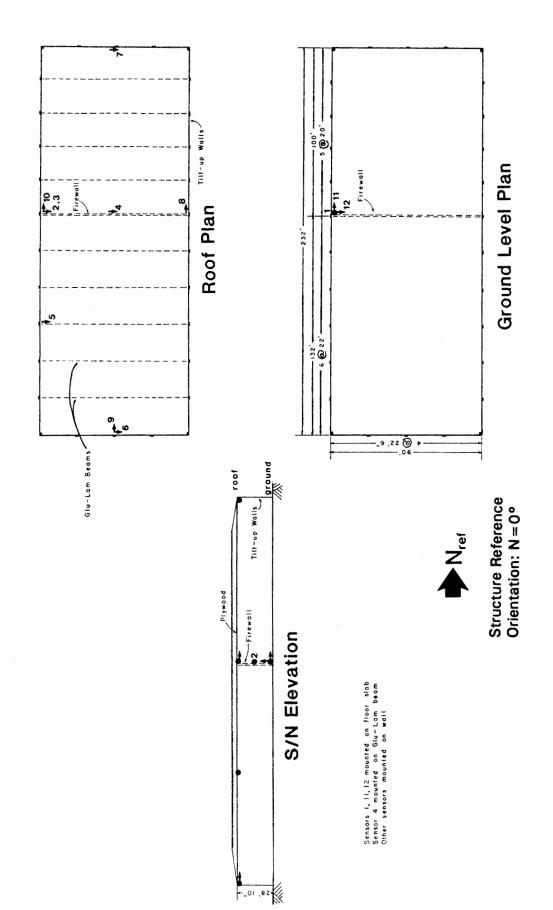
No, of Stories above/below ground: 1/0 Plan Shape: Rectangular Base Dimensions: 232' x 90' Typical Floor Dimensions: 232' x 90' Design Date: 1971 Construction Date: 1972±

Vertical Load Carrying System:
Tilt-up bearing walls, plywood panelized roof on glu-lam beams.
Lateral Force Resisting System:
Precast concrete tilt-up shear walls and plywood roof diaphragm.

Foundation Type: Cast-in-place concrete piles. à,

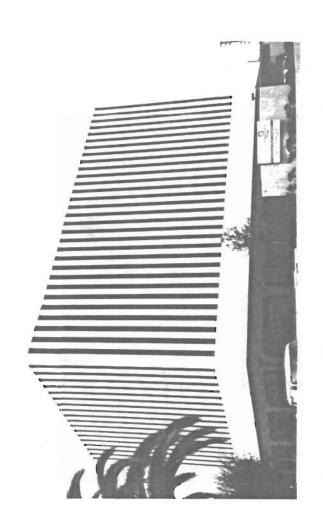
Redlands - 1-story Warehouse (CSMIP Station No. 23495)

SENSOR LOCATIONS



Redlands - 1-story Warehouse (CSMIP Station 23495)
1 Ground Floor - Up
2 Mid-height on West Wall - Enward My Mark Mark Mark Mark Mark Mark Mark Mark
3 Roof: Center of West Wall J. E. M. M. W.
4 " Center- Francounty () MANNAW () MANNAMAN () MANNAM
5 " ½-length point of West Wall E WW / WW/ / WW / WWW www. Www. Www. O.60 g
6 " Center of South Wall TEV / VMM/VMMMMM/M/M/M/M/M/M/M/M/M/M/M/M/M
7 " Center of North Wall July / Very/Very/Wernersensersersersersersersersersersersersersers
8 Roof: Center of East Wall - Nay Now
9 " Center of South Wall - N Will Will Will Will Will Will Will Wi
10 "Genter of West Wall - Nay And And Andron Andron Andron Andron Andron Andron Andron 13 g
11 Ground Floor - N
12 " Emmenmon North-Nort
Structure Reference Orientation: $N=0^\circ$
10 11 2 3 4 4 1 5 1 1 2 2 Sec.

Redlands - 7-story Commercial Bldg. (CSMIP Station No. 23481)



No. of Stories above/below ground: 7/1 Plan Shape: Rectangular Base Dimensions: 228' x 250' Typical Floor Dimensions: 140' x 93' Design Date: 1980

Construction Date: 1980

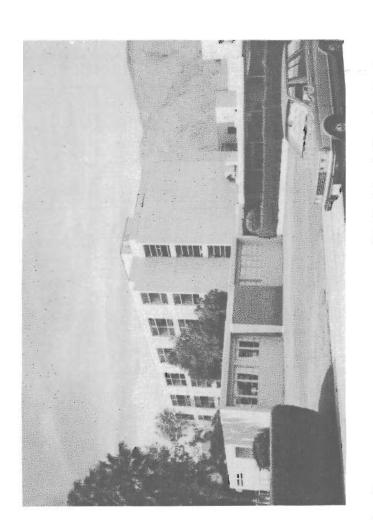
Vertical Load Carrying System:
2.5" concrete slabs over steel decks
supported by steel beams and columns.
Lateral Force Resisting System:
Perimeter moment resisting steel frames.
Foundation Type:

Spread footings.

3 \$ 7 -- Moment resisting steel frames 4th Floor Plan 2nd Floor Plan **Roof Plan** 0 4 9 SENSOR LOCATIONS Structure Reference Orientation: $N = 0^{\circ}$ conc. wall Ground Redlands - 7-story Commercial Bldg. Roof 6th 4th 2nd conc. encased steel columns E/W Elevation 5@28' = 140' Basement Plan (CSMIP Station No. 23481) 228 4.89="e-\E1@4 12'-5" 3@31, = 83, 12′-7" 10, -9-,60 L 720,

Redlands - 7-story (CSMIP Station	ory Commercial Bldg. Record 23481-C0245-92182.04
1 Basement - Up	Basement - Up
2 Roof: East Wa	Wall - S 0.17 g
3 " West Wall	all - S
4 4th Floor: Ea	East Wall - S 0.14 g
5 " We	West Wall - S
6 2nd Floor: Es	East Wall - S
7 " We	West Wall - S
8 Basement: Ea	East Wall - S
9М " 96	
10 Roof - W	Bolle B
11 4th Floor - W	" O.12 B
12 2nd Floor - W	W W W W W W W W W W W W W W W W W W W
13 Basement - W	$\overline{g} = 0.00$
0 1 2	Structure Reference Orientation: N=0° $\frac{1}{3}$ 4 5 $\frac{1}{4}$ 5 $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ Sec.

Palm Springs - 4-story Hospital (CSMIP Station No. 12299)

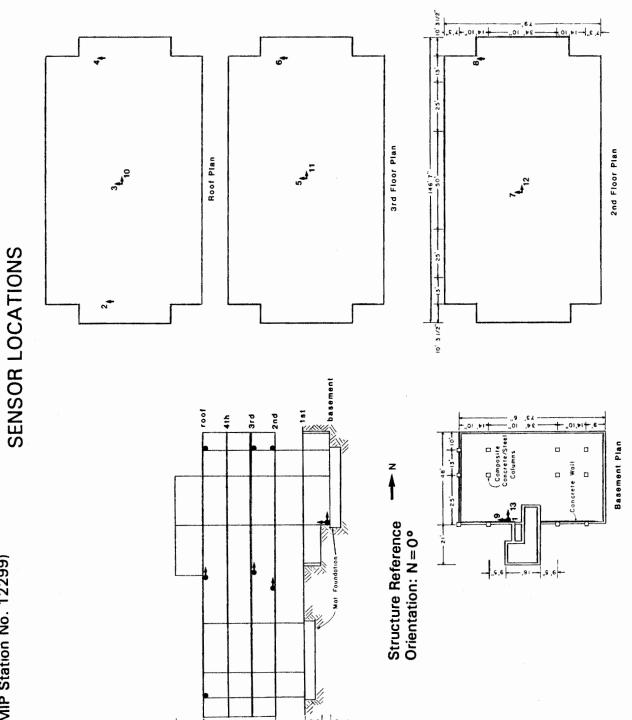


No. of Stories above/below ground: 4/partial basement
Plan Shape: Rectangular
Base Dimensions: 147' x 79'
Typical Floor Dimensions: 147' x 79'
Design Date: 1967
Construction Date: 1974

Vertical Load Carrying System:
4"-5" concrete slabs supported by steel frame; steel columns encased in concrete between basement level and first floor.
Lateral Force Resisting System:
Distributed steel moment frames.

Foundation Type: Spread footings.

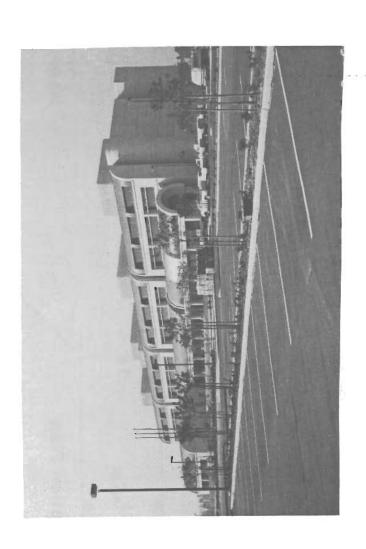
Palm Springs - 4-story Hospital (CSMIP Station No. 12299)



Record 1229-C0192-92180.05 Palm Springs - 4-story Hospital (CSMIP Station 12299)

1 Basement - Up
2-Roof: South Wall-Warran Chrown All Mary Many Anger Mary Mary Mary Mary Mary Mary Mary Mar
3"
4 North Wall - W North Wall - W
5.3rd Floor: Center = When when when when when when when when w
6 North Wall - W W W W
7 2nd Floor: Center - Whenever and Whomewhere Whenever Whomewhere
8 " North Wall-W when when when when when when when when
9 Basement - W
10 Roof: Center - N
11 3rd Floor: Center - Manny word Wynnman Jana Manna Jana Floor: Center - Manna Jana Floor
12 2nd Floor: Center - Munnynynynynynynynynynynynynynynynynynyn
13 Basement - N
0 1 2 3 4 5 2 2 Sec.

Rancho Cucamonga - 4-story Law & Justice Center (CSMIP Station No. 23497)



No. of Stories above/below ground: 4/1 Plan Shape: Rectangular

Base Dimensions: 414" x 110"

Typical Floor Dimensions: 414' x 110' Design Date: 1983

Construction Date: 1985

Vertical Load Carrying System:

Concrete slabs over steel deck supported by steel frames on elastomeric bearings.

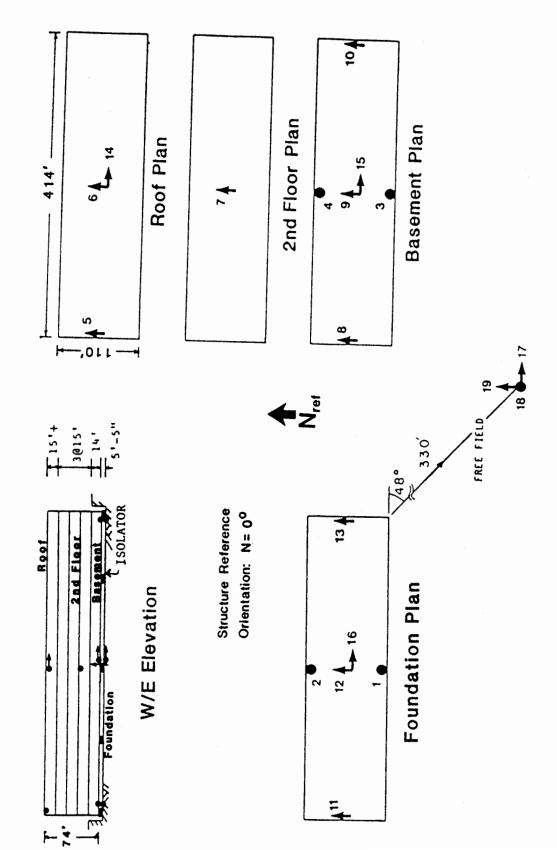
Lateral Force Resisting System:

Braced steel frames in upper four stories; concrete shear walls at basement; base isolated on elastomeric bearings.

Foundation Type: Spread footings.

Rancho Cucamonga - Law and Justice Center (CSMIP Station No. 23497)

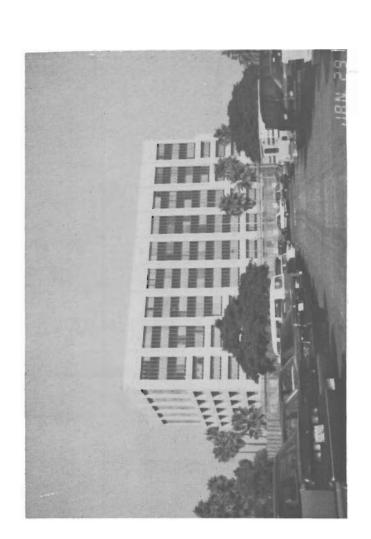
SENSOR LOCATIONS



Record 23497-C0273-92180.03	Max. Accel. = 0.03 g	0.04 g	0.04 g	0.04 g	www		0.04 g	0.04 g	0.04 g	0.05 g	0.03 g	9.03	0.04 g	lon: N=0°	15 20 22 Sec.
Justice Center (Sensors 1-13)	rs): S. Wall - Up	N. Wall - Up); S. Wall - Up	N. Wall - Up): W. Wall - N	Center - N	E. Wall - N	rs): W. Wall - N	Center - N	E. Wall - N	Structure Reference Orientation:	
Rancho Cucamonga - Law & Jus (CSMIP Station 23497)	Foundation (Below Isolators):	11	Basement (Above Isolators):		Roof: W. Wall - N	" Center - N	2nd Floor: Center - N	Basement (Above Isolators)			Foundation (Below Isolators)	11		1	1 2 3 4 5
Ж Н		2	<u>ش</u>	4	5	9	7	∞	6		ΞΪ	12	13	<u> </u>	

0118-92180.03	cel. = 0.07 g	0.02 g	0.06 g	0.05 g	0.04 g	0.04 g	
Record 23497-C0118-92180.03	Max. Accel.						
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Law & Justice Center (Sensors 14-19) 23497)		: Center - E	S): Center - E		والمعارف وال		Structure Reference Orientation:
Rancho Cucamonga - Law & Just (CSMIP Station 23497)	14 Roof: Center - E	15 Basement (Above Isolators): Center	16 Foundation (Below Isolators):	17 Free Field E	18 Free Field - Up	19 Free Field - N	

Seal Beach - 8-story Office Bldg. (CSMIP Station No. 14578)



No. of Stories above/below ground: 8/1 Plan Shape: Rectangular

Base Dimensions: 245' x 137'

Typical Floor Dimensions: 245° x 137' Design Date: 1966

Construction Date: 1967 & 1990

Note: In 1989-90, the building was strengthened by adding an exterior ductile concrete frame and isolating the columns.

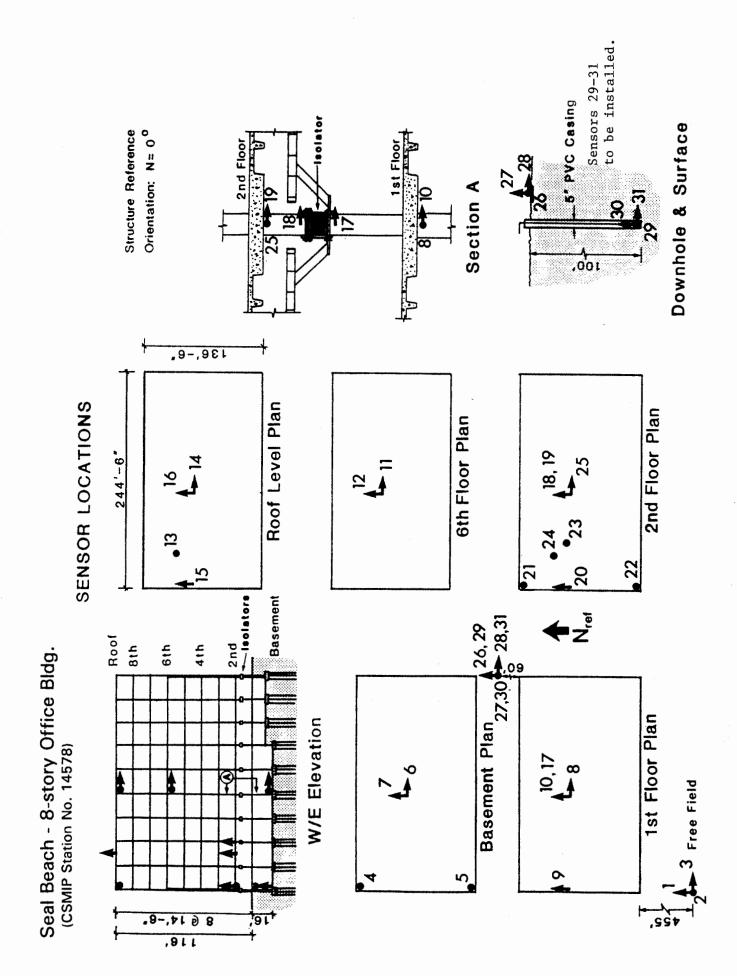
Vertical Load Carrying System: Concrete waffle slabs supported by concrete columns on load-bearing isolators.

Lateral Force Resisting System: Exterior ductile concrete fram

Exterior ductile concrete frames, isolated by rubber/steel laminated bearings between the first and second floors.

Foundation Type:

Cast-in-place concrete piles (about 50' long).



	(CSMIP Station 14578)	RECORD 14578-CS101-92180.11
15	Roof: West Wall - N	
16	Roof: Centef - N	
12	6th Floof: Centef - N	
20	2nd Floof: West Wall - N	
19	2nd Floor: Center, Above Isolator - N	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
78	2nd Floor: Column, Above Isolator — N	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
17	1st Floor: Column, Below Isolator - N	MMMMMMM MMMMmmmmmmmmmmmmmmmmmmmmmmmmmm
10	1st Floor: Center, Below Isolator - N	MMMMMMM MMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
တ	1st Floor: West Wall - N	Mymmyn, my mynny myn myn
7	Basement: Center - N	
26	Ground Surface - N	MMMMMM MMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
—	Free Field - N	for for some for the second of
	Structure Reference Orientation: N=0°	! ! ! ! !
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Seal Beach - 8-story Office Bldg.

RECORD 14578-CS101-92180.11

Seal Beach - 8-story Office Bldg.

(CSMIP Station 14578)

14	Roof: Center - E
.	6th Floor: Center - E
25	2nd Floor: Center, Above Isolator - E
œ	1st Floor: Center, Below Isolator - E
9	Basement: Center — E
28	Ground Surface - E
က	Free Field - E
13	1 1
24	1
23	2nd Floor: W. Side Column - Up
21	2nd Floor: NW Corner - Up
22	2nd Floor: SW Corner - Up
4	Basement: NW Corner - Up
5	Basement: SW Corner — Up
27	Ground Surface - Up
2	Free Field - Up
	Stfucture Reference Orientation: N=0°
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Seal Beach — 8—story Office Bldg. (CSMIP Station 14578)	2180.11
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10 MANAM/MWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW	0.05 g
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1 Mound Mound Mound Mound Tours Mound Moun	0.04 g
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1 WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW	0.04 g
22 25 35 40 40	

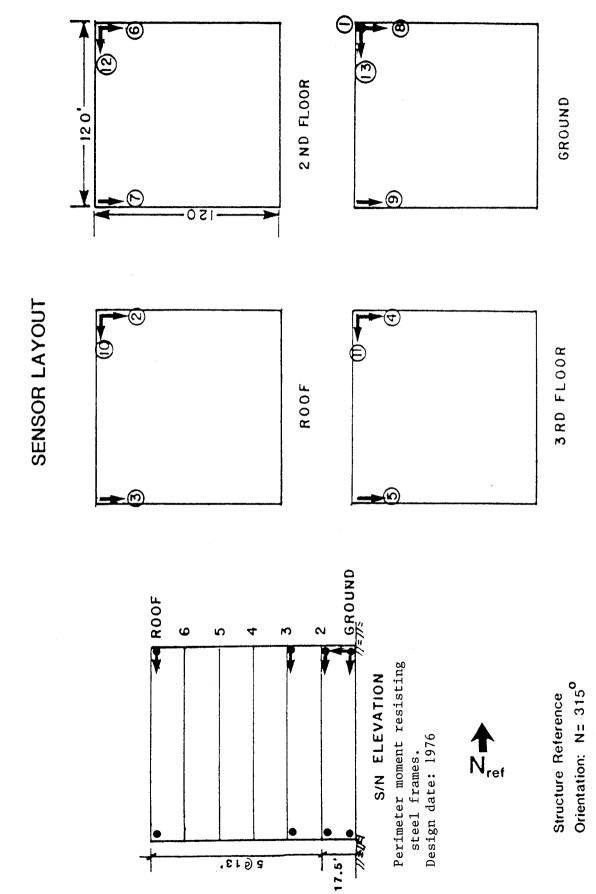
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RECORD 14578-CS101-92180.11

Seal Beach — 8—story Office Bldg. (CSMIP Station 14578)

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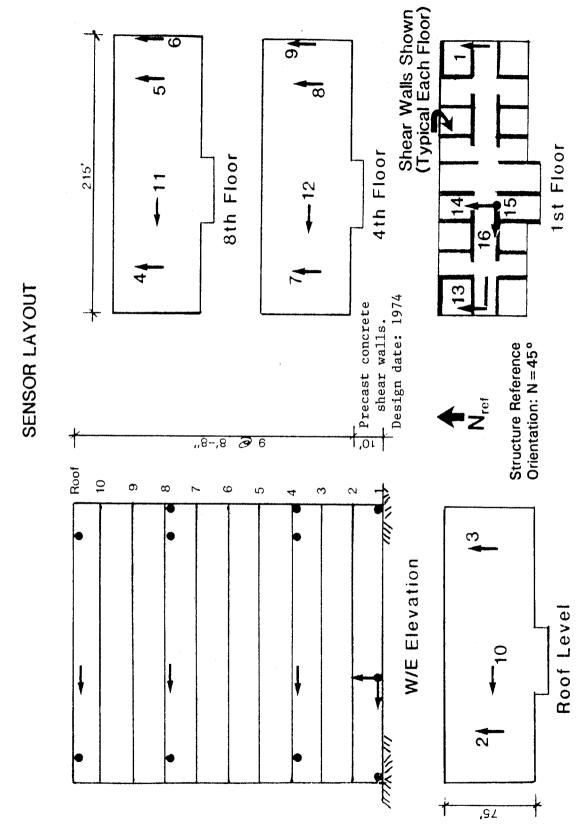
Burbank - 6-story Commercial Bldg. (CSMIP Station No. 24370)



Record 24370-C0196-92192.03																20 22 Sec.
															. N=315°	15
.8															Structure Reference Orientation:	10
Burbank - 6-story Commercial Bldg. (CSMIP Station 24370)	1 Ground Floor: NW Corner - Up	T C THE STATE	Z KOOI: NW COINEI - E	3 " SW Corner - E	4 3rd Floor: NW Corner - E	5 " SW Corner - E	6 2nd Floor: NW Corner - E	7 " SW Corner - E	8 Ground Floor: NW Corner - E	9 " SW Corner - E	10 Roof: NW Corner - S	11 3rd Floor: NW Corner - S	12 2nd Floor " - S	13 Ground Floor: " - S		-0 1 2 3 4 5

	Max. Accel. = 0.01 g	0.11 8	0.09 g	g 90.0	0.05 g	0.04 g	0.02 g	0.02 g	0.07 g	0.05 g	0.03 g	0.04 g	ce Orientation: N=315° 40 44 Sec.	
Burbank - 6-story Commercial Bldg.			3	2			8	6	10		12	13	Structure Reference Orientation: 25 30 35	

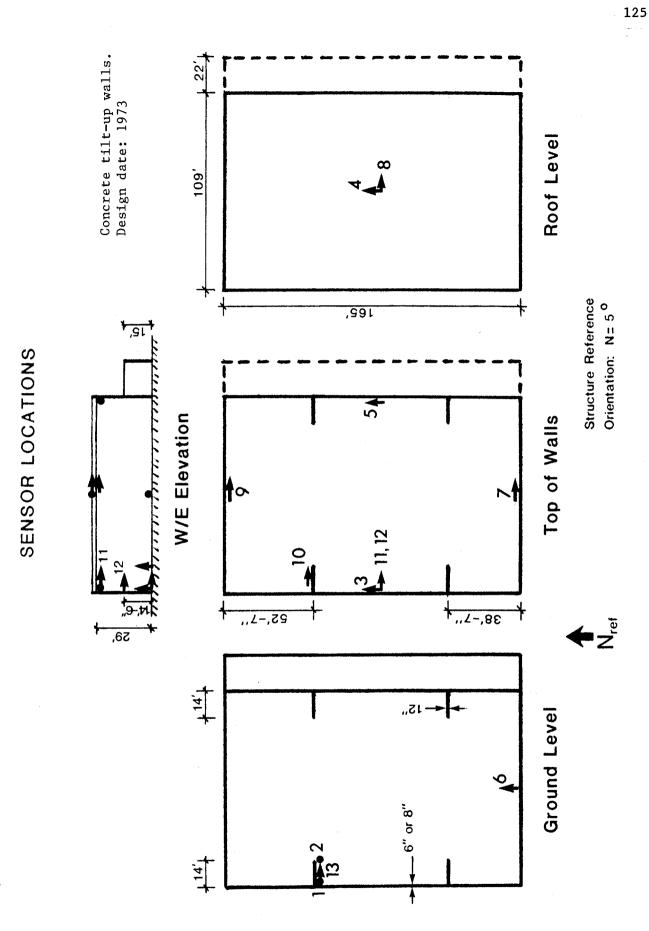
Burbank - 10-story Residential Bldg. (CSMIP Station No. 24385)



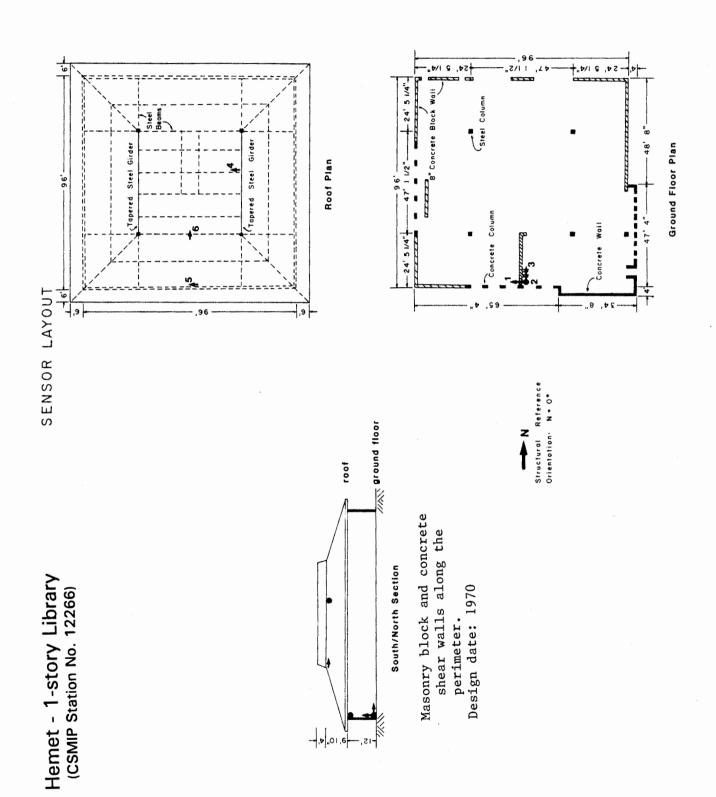
Burbank - 10-story Residential Bldg (CSMIP Station 24385-C0193-92192.03
1 1st Floor: E. End - N Max. Accel. = 0.02 g
2 Rost; W. Shear Wall - N
3 -" E. Shear Wall - N
4 8th Floor: W. Shear Wall - N 0.04 g
5 "E. Shear Wall - N
6 mm. E. Epd - N
7 4th Floor: W. Shear Wall - N
8 " E. Shear Wall - N 0.02 g
9 " E. End - N
10_Roof: Center = W
11 8th Floor: Center - W 0.07 g
12 4th Floor: Center - W 0.05 g
13 lst Floor: W. End - N
Structure Reference Orientation: N=45° 0.11.2.3.44.5. 10 0.11.2.3.44.5.

Burbank - 10-story Residential Bldg. (CSMIP Station 24385) 14 lst Floor: Center - N 15 " " - Up 16 " " - W
- 1 1 1 1

Colton - 1-story School Gym (CSMIP Station No. 23540)



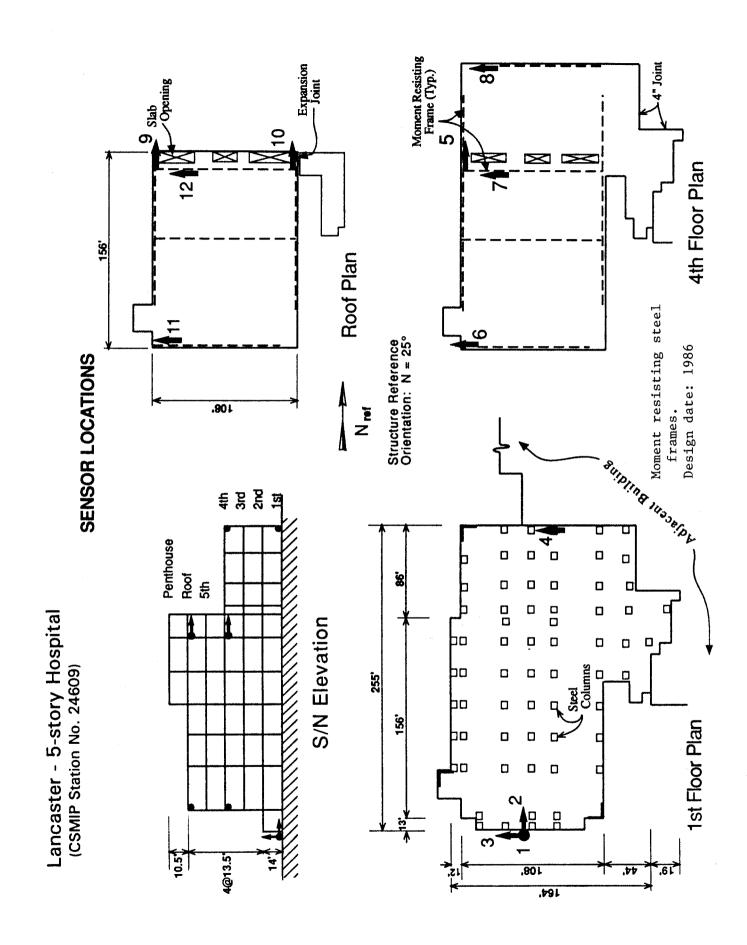
Colton - 1-story School Gym (CSMIP Station 23540)	Record 23540-C0286-92181.04
l Base of NW Inner Wall, W. End - Up	Max. Accel. = 0.05 g
2 "E. End - Up	0.05 g
$3 \; extsf{Top of West Wall, Center - N}$	0.04 g
4 Roof. Center - N	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
. Center -	
6 Ground Level, South Wall - N	0.04 g
7 Top of South Wall, Center - ${ m E}$	0.05 g
8 Roof, Center - E	Mercy more of the grand of the grand
$9~{ m Top}~{ m of}~{ m North}~{ m Wall}$, Center – E	0.05 g
10 Top of NW Inner Wall, Center - $\rm E$	0.07 g
11 Top of West Wall, Center - E	0.10 g
12 Mid-height of West Wall, Center - E	0.22 g
13 Inoperative	
Structure Reference Orientation: N=5°	
0 1 2 3 4 5 2 2 15	20 22 Sec.



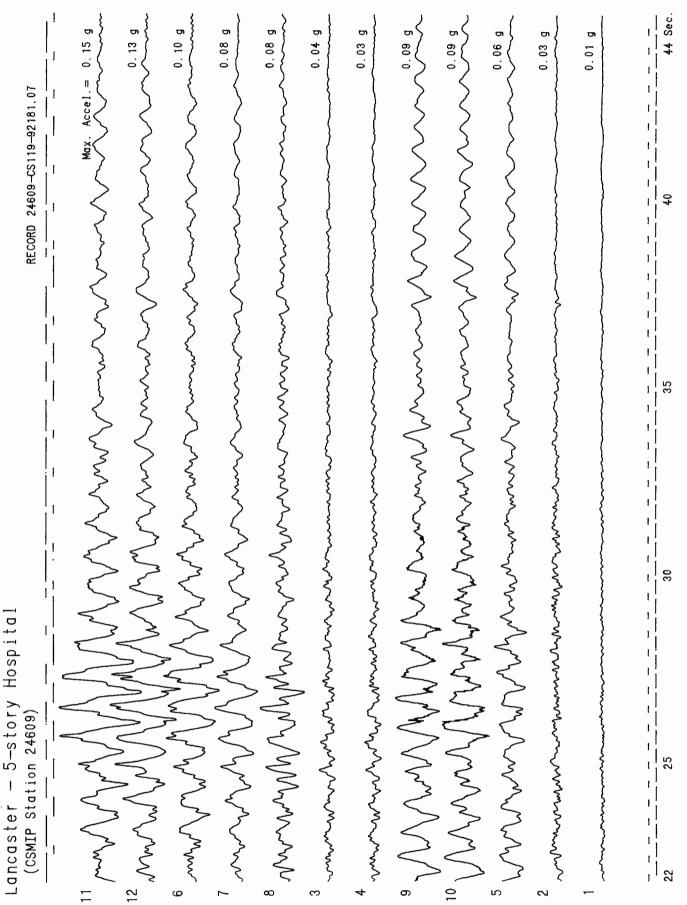
Hemet - 1-story Library (CSMIP Station 12266)	11-92183.04

I Ground Floor: South Wall - W	:1. = 0.07 g
$\frac{1}{2}$	0.09 g
$\frac{3}{1}$	0.06 g
4 Roof: Near Center - W	0.21 g
5 " South Wall - W	9.10 g
6 "Near Center - N 	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Structure Reference Orientation: N=0°	
1 1 2 3 4 5	22 Sec.

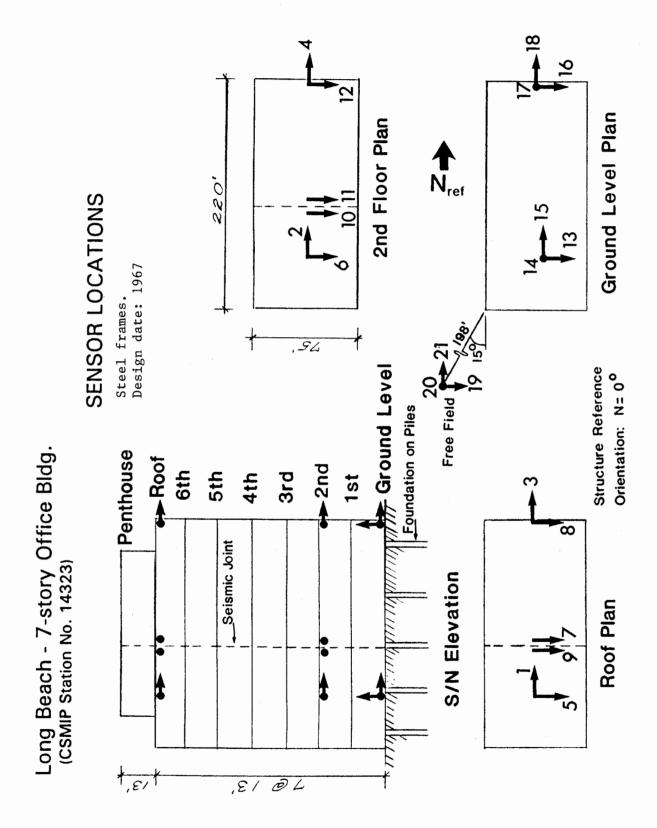
<pre>Hemet - 4-story Hospital (concrete shear walls, design date:1965) (CSMIP Station 12267)</pre>	Record 12267-C0126-92183.06
1 Basement: Center - W	Max. Accel. = 0.04 g
2 11 1 - Up	0.05 g
3 11 12 $-$ N	8 90.00
4 " East Wall - N	0.04 g
5 Roof: Center - N 	0.14 g
$\frac{1}{M} = \frac{1}{1}$	g 60.0
7 "East Wall - N :	$0.10~\mathrm{g}$
8 2nd Floor: Center - N	9.08 g
M - H H H	0.05 g
10 " East Wall - N	0.05 g
nce Orientati	
0 1 2 3 4 5	



) 	Lancaster — 5—story Hospital (CSMIP Station 24609)	RECORD 24609-CS119-92181.07
11 R	Roof, South Wall - W	
12 R	Roof, North Wall - W	mond of hard manner
9	4th Floor, South Wall - W	Sandy Mymmon March
4	4th Floor, Near Center - W	manne manne manne de la company de la compan
œ 4	4th Floor, North Wall - W	www.www.wyw
ъ 1	1st Floor, South Wall - W	man m
4	1st Floor, North Wall - W	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
<u>Б</u>)	Roof, West Wall - N	1 Ly My My My Many
01	Roof, East Wall - N	
رب م	4th Floor, West Wall - N	W Marman
2	1st Floor, South Wall - N	Me standard to the standard to
	1st Floor, South Wall - Up	
ı	Structure Reference Orientation: N=25°	; ; ; ; ; ; ; ;
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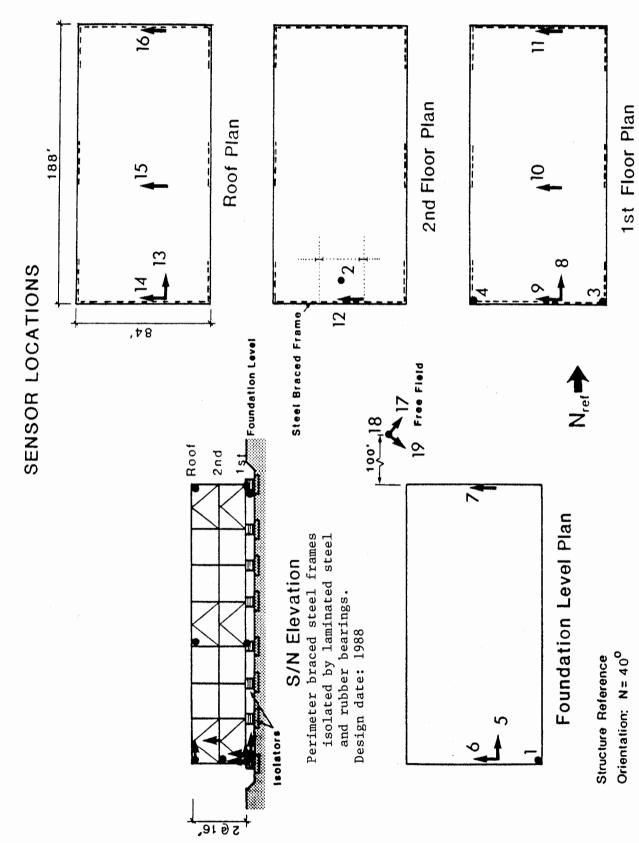
Record 14323-C0154-92224.04														20 22 Sec.
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Long Beach - 7-story Office Bldg. (CSMIP Station No. 14323)	Bldg. Roof: Center	" 2nd Floor:	Bldg. Roof:	" 2nd Floor:	Bldg. Roof: Center	" 2nd Floor:	Bldg. Roof: Seismic	" North	Bldg. Roof: Seismic	" 2nd Floor:	Bldg. 2nd Floor:	= }	•	1 2 3 4
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ice Bldg. 4323)												Bldg. reference FF instrument was not triggered.	
Long Beach - 7-story Office Bldg. (CSMIP Station No. 14323)		5	3	5				6	10		12	•	

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Long Beach — 7—story Office (CSMIP Station 14323)	- – – N. Bldg	E		0 1 2			22
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Los Angeles - 2-story Fire Command Control Bldg. (CSMIP Station No. 24580)



RECORD 24580-CS104-92183.08

2-story Fire Command/Control Bldg.

(CSMIP Station 24580)

Los Angeles -

2nd Floor: Center of Side Side Dp Up UND WMM MM MANDAM MANNAM MAN My my May Many Many May morrow for the party of the par Structure Reference Orientation: N=40° Foundation: SE Corner — Up 1st Floor: Near Center - W 1st Floor: SW Corner - Up 1st Floor: SE Corner - Up Foundation: N. Wall - W Wall - W Wd]] - N Wall - W 1st Floor: N. Wall - W Wq 1 1 - N Roof: Near Center - W Wall - W Wall - N Wq11 -Foundation: S. Foundation: S. 2nd Floor: S. 1st Floor: S. 1st Floor: S. 14 Roof: S. Roof: N. Roof: S. 15 16 12 10 13 S 2 တ ဖ ∞

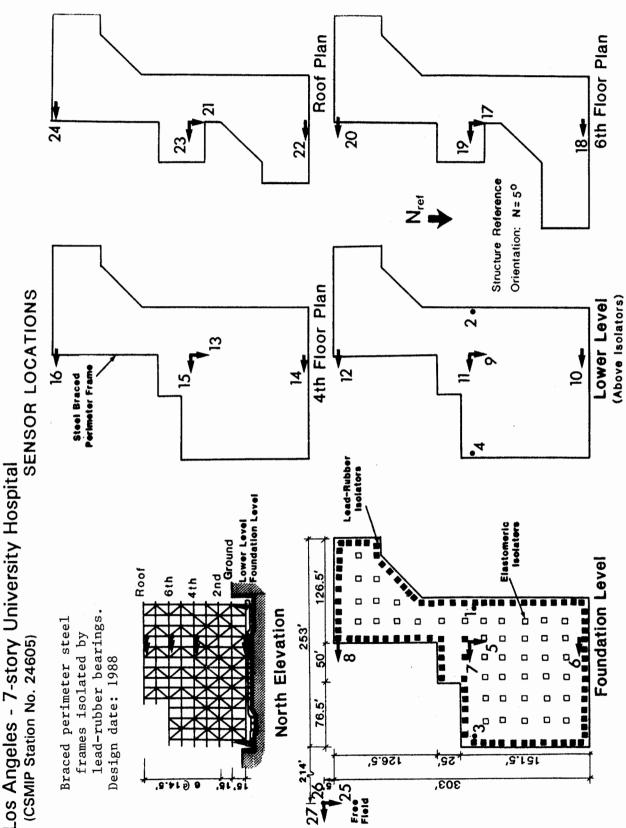
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RECORD 24580-CS104-92183.08

Los Angeles — 2—story Fire Command/Control Bldg. (CSMIP Station 24580)

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Los Angeles - 7-story University Hospital

- 7-story University Hospital on 24605) RECORD 24605-CS115-92184.06			-E	Ma11 – E	ter – E	Mal1 - E	Mall - E	ter - E	Mall - E	. Wall - E	enter – E	. Wall - E	el: N. Wall – E	Center - E	S. Wall - E	Structure Reference Orientation: N=5°	
Los Angeles — 7—story ((CSMIP Station 24605)	22 Roof: N. Wall - E	23 Roof: Center — E	24 Roof: S. Wall - E		,		1	,	,	1 }	,	1 }	Wall -	1 {	Wall -		

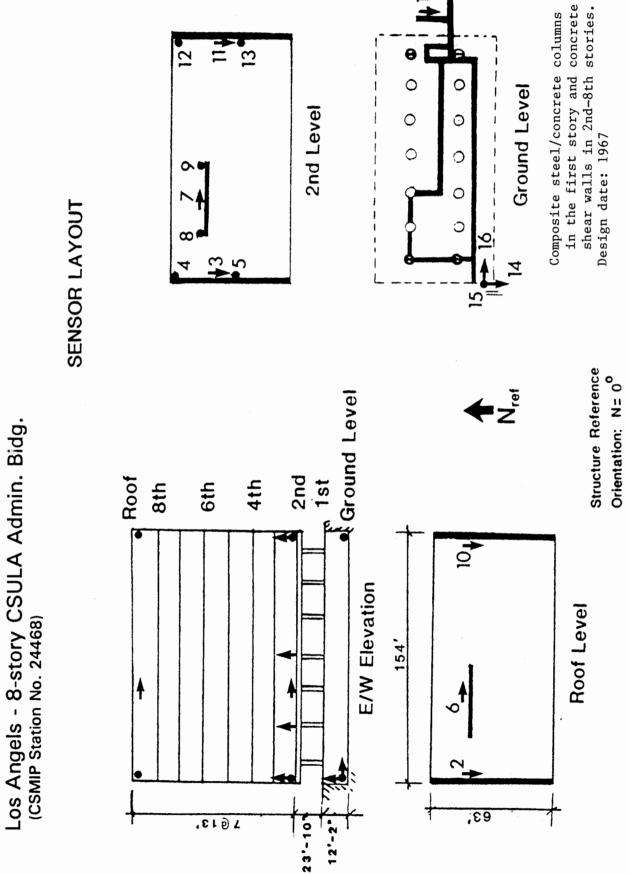
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- 7-story Univers n 24605)			\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	}	\	1 - Up	dr 	11 - Up		}	! 1	
s Angeles - 7-st (CSMIP Station 24605)	z	Z 1			Lower Level: E. Wall - Up	Foundation Level: E. Wall	Lower Level: W. Wall - Up	Foundation Level: W. Wall	}	}	 	3
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RECORD 24605-CS115-92184.06	Max.												! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! !	40	geration.
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s - 7-story Univers tion 24605)					in a sy photosomer desir de	my Winnerman Marchan						AND		25	This page
Los Angeles — 7—st (CSMIP Station 24605)	21 2	) }	13	6	5 mrch/hhroms	25 my Mrs.	4 ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	3	2 ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	1	26 mmmmm	27 -mapapatanan/ymathornana		22	



Record 24468-C0222-92190.03

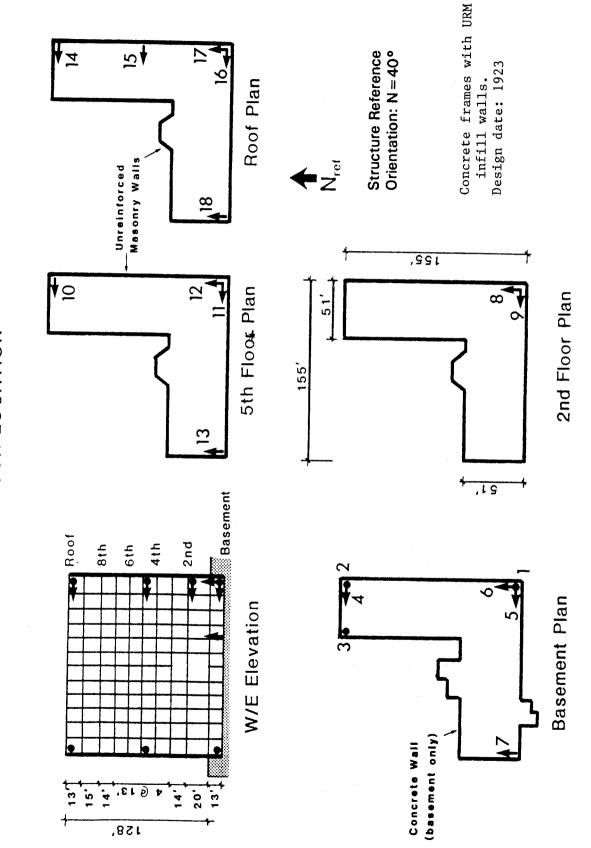
Los Angeles - 8-story CSULA Admin. Bldg. (CSMIP Station 24468)

22 Sec. 1.1.1.1. 0.06 g 0.02 g Max. Accel. = 0.02 g 0.04 g 0.04 g 0.03 g 0.01 g 0.04 g 0.03 g 0.02 g 0.03 g 0.02 g 0.02 g Structure Reference Orientation: N=0° W. End of Central Wall - Up E. End of Central Wall - Up - Up Center of W. Wall - Up N. End of E. Wall - Up Center of E. Wall - Up N. End of W. Wall 2nd Floor: Central Wall - E Ground Floor: E. End - S 6 Roof: Centeral Wall - E 2nd Floor: W. Wall - S 2nd Floor: E. Wall - S 2 Roof: W. Wall - S S. 10 Roof: E. Wall Ξ Ξ = Ξ 12 8 6

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= 0.03 g	Max. Accel. = 0.03 g			14 Ground Floor: SW Corner - S	SW Cor	100r:	round	14 G
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92190.03	Record 24468-S1602-92190.03		Los Angeles - 8-story CSULA Admin. Bldg. (CSMIP Station 24468)	SULA Ad 8)	tory C	Static	Angeles - 8-story CSU (CSMIP Station 24468)	Los

Los Angeles - 9-story Office Bldg. (CSMIP Station No. 24579)

SENSOR LOCATION



and by my and many mon Structure Reference Orientation: N=40° Los Angeles — 9-story Office Bldg. (CSMIP Station 24579) **≯** | End - N End - N Wall, E. End - W End - W End — Up dV − End - N Basement: N. Wall, W. End - Up **≯** | End - W End ¬ N End - N End End End **≯** Wall, Center - W End ¬ ₩ **Z** End - N نبا Wall, E. s. s. s. End End نیا Wall, E. s. s. نیا نبا Wall, Wd I I, Wall, Wd ] ], ₩ 1 I, Wd 11, Wq 1 1, Wd 1 1, Wd 1 1, نبا s. Roof: N. Wall, E. s. Wd 1 1, Wd ! !, Roof: W. Wall, 5th Floor: N. 5th Floor: S. 2nd Floor: S. 5th Floor: W. 5th Floor: E. 2nd Floor: E. Basement: W. Basement: E. Basement: S. Basement: N. Basement: N. Basement: S. Roof: S. Roof: E. Roof: E. 14 16 15 = 10 S 13 12 တ  $\infty$ 9

RECORD 24579-CS103-92190.10

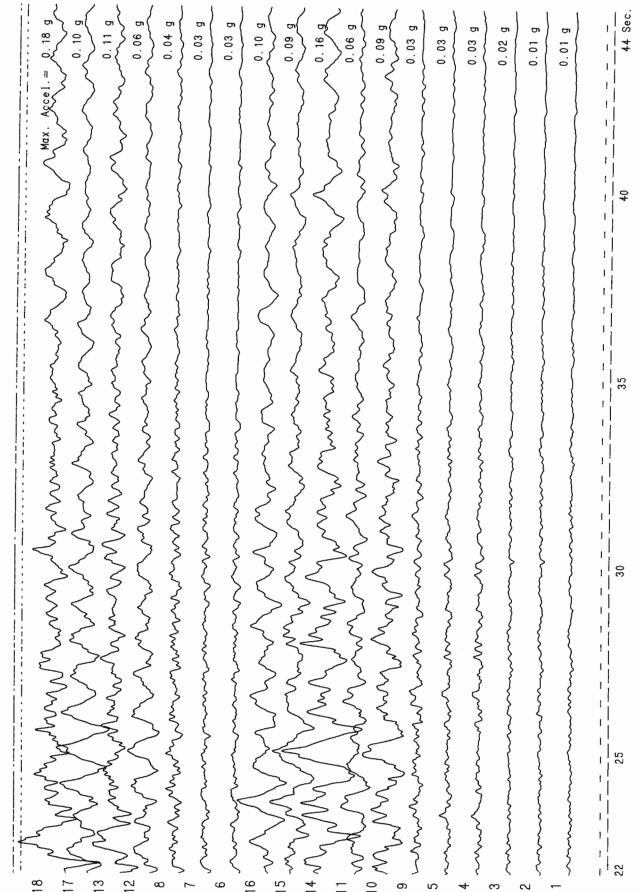
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RECORD 24579-CS103-92190.10

9-story Office Bldg.

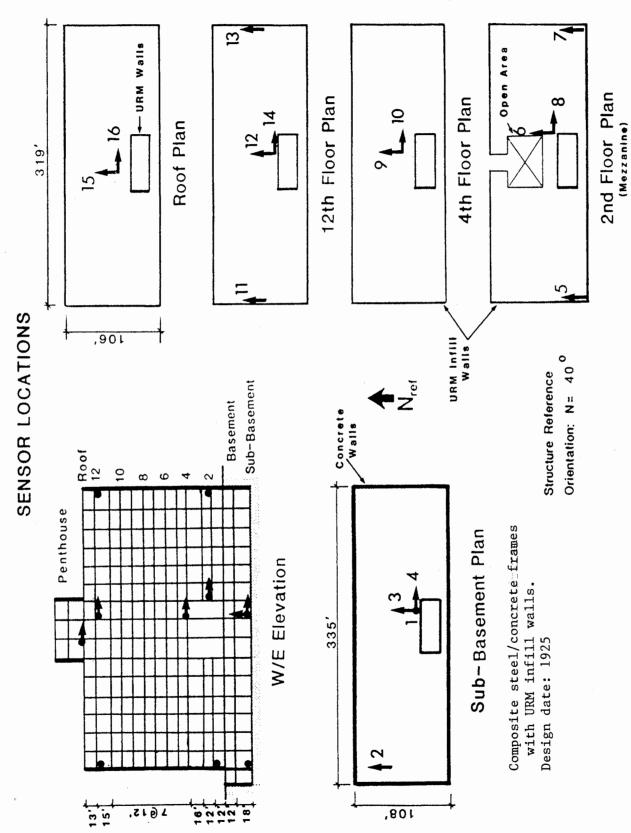
(CSMIP Station 24579)

Los Angeles



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Los Angeles - 12-story Commercial/Office Bldg. (CSMIP Station No. 24581)

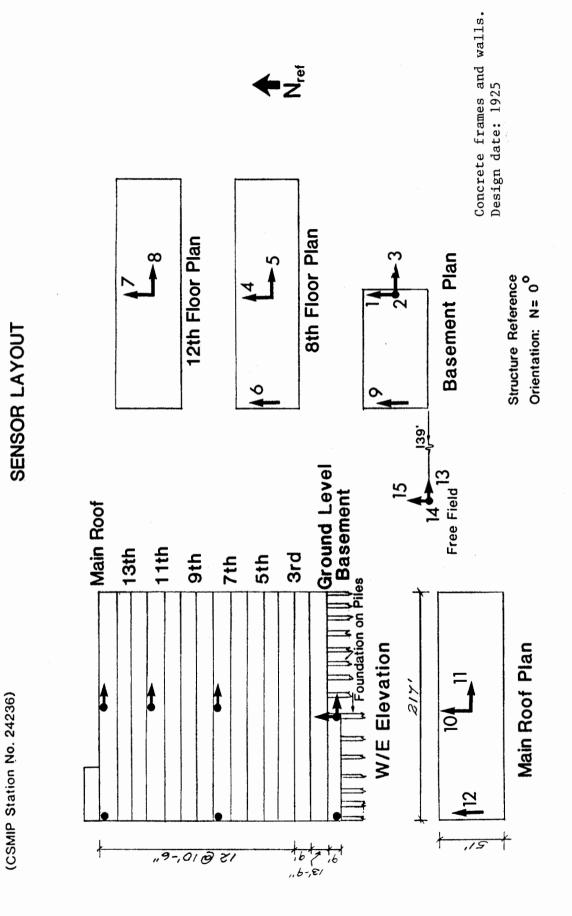


Los Angeles — 12—sto (csMIP station 24581)	12—story Commercial/Office Bldg :4581)	RECORD 24581—CS105—92190.06
15 Roof: Near Center - N		
11 12th Floor: W. Wall - N		
12 12th Floor: Near Center - N	N	
13 12th Floor: E. Wall — N		
9 4th Floor: Near Center - N		
5 2nd Floor: W. Wall - N		
6 2nd Floor: Near Center - N		
7 2nd Floor: E. Wall - N		
2 Sub-basement: Near NW Corner	er - N	
3 Sub-basement: Near Center -	N -	
16 Roof: Near Center — E		•
14 12th Floor: Near Center — E		
10 4th Floor: Near Center — E		
8 2nd Floor: Near Center — E		
4 Sub-basement: Near Center -	3 -	
1 Sub-basement: Near Center -	dn –	> {
<b>*</b>	Structure Refe	
0 1 2 3 4		
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/Office Bldg	Max. Accel. = 0.06 g  Max. Accel. = 0.06 g  Max. Accel. = 0.06 g  0.05 g  0.05 g	0.05 g	0.04 g	35 40 44 Sec.
Los Angeles — 12—story Commercial/Office (CSMIP Station 24581)	15			22 25 30

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Los Angeles - Hollywood Storage Bldg.



1dg. Center -	1 Basement: B 2 " 4 8th Floor: 6 " 7 12th Floor: 9 Basement: W 10 Roof: Cente
West Wall - N	12 We
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Los Angeles - Hollywood Storage Bldg. (CSMIP Station 24236)	Record 24236-C0124-92191.03
1	Max. Accel. = 0.03 g
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4	g 90.0
	g 50.0
	0.03 g
	0.05 g
	0.07 g
	0.03 g
10	g 60.0
11	80.0
12	0.04 g
page	
22 30	35 44 Sec.

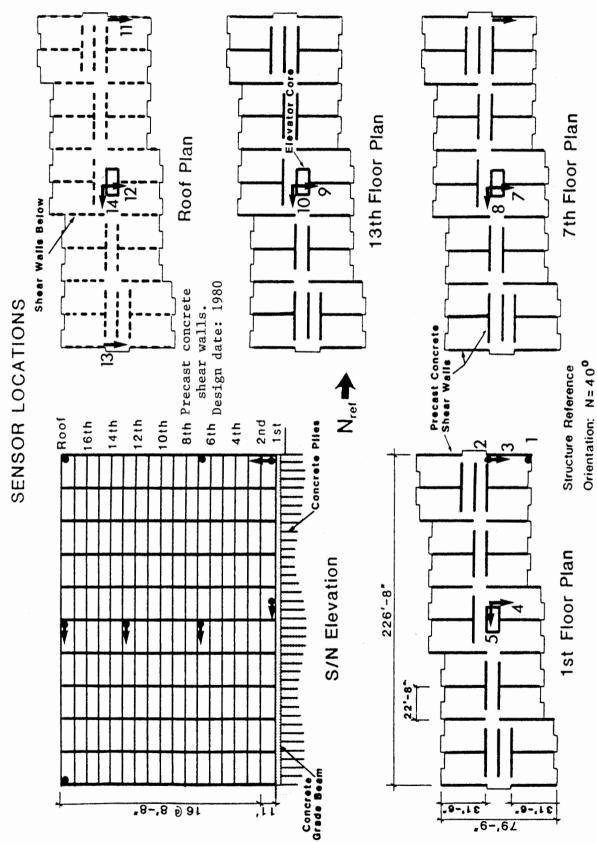
*Sensors 14 and 15 are attached to facia panel and slab, respectively, of parking level 1 2nd Floor Plan 8th Floor Plan Roof Plan 344' 8th Distributed Steel SENSOR LOCATION moment frames. Orientation: N= 43⁰ Structure Reference **Building Projection** 4th date: 1961 188, zak B Level ₹A Level Parking Garage Design Penthouse Los Angeles - 15-story Govt. Office Bldg. (CSMIP Station No. 24569) 6th 14th 12th 10th Roof 2nd 10 Concrete Shear Walls B Level Plan Elevation 382, S/N Canopy 9.5' (typ.) **▼14,15*** Parking Garage 19,19, 58, 50, 128, 53, 85, 14 6 13,= 185, 583,

geles — 15—story Goverr P Station 24569)	RECORD 24569-CS102-92189.05
12 Roof: S. Side - W	
13 Roof: N. Side - W	
9 8th Floor: S. Side - W	
10 8th Floor: N. Side - W	
6 2nd Floor: S. Side - W	
7 2nd Floor: N. Side - W	
3 Level B: S. Side - W	
4 Level B: N. Side - W	
11 Roof: S. Side, Center - N	
8 8th Floor: S. Side, Center - N	
5 2nd Floor: S. Side, Center - N	
14 Parking Level 1: Family Reput of the Mark Mark Company of the C	White the production of the pr
15 Parking Level 1: Slab - N	
2 Level B: S. Side - N	
1 Level B: S. Side - Up	
Structure Reference Orientation:	N=43°
3 4 5 10	15 20 22 Sec.
This page plotted with 4.x vertical	exaggeration.

0.02 g 0.04 g 0.03 g 0.01 g 0.03 g 0.02 g 0.06 g 0.03 g 0.04 g 0.03 g 0.04 g Max. Accel.= RECORD 24569-CS102-92189.05 14 Phillippe My prod January Carl Shall Mark Jana Carl Shall Mark Jana Carl Shall Sh Los Angeles - 15-story Government Office Bldg 15 wywwwwww Bldg. reference FF record shown on page 47. (CSMIP Station 24569)

This page plotted with 4.0x vertical exaggeration.

Los Angeles - 17-story Residential Bldg. (CSMIP Station No. 24601)



13   Roof: Senter - E	Ĭ.	Los Angeles — 17—story Residential Bldg. (CSMIP Station 24601)		RECORD 24601-CS111-92190.13	
Roof: Center - E		3 - 1		}	
13th Floor: Center - E		ı l			· <
13th Floor: Center - E	<del></del>	1			> >
7th Floor: Center - E   7th Floor: NE Woll - E   7th Floor: NE Woll - E   7th Floor: NE Woll - E   7th Floor: Center - S   7th Floor: Center - S   7th Floor: New Center - S   7th Floor: New Holl, W. End - Up   7th Floor: NE Woll, E. End - Up	က	!			, >
1st Floor: New Wall - E	_				{
1st Floor: New Center - E   Roof: Center - S   13th Floor: Center - S   1st Floor: Center - S   1st Floor: New Center - S   1st Floor: Ne Wall, W. End - Up   1st Floor: NE Wall, E. End - Up   1st Floor: NE Wa	9	1			\ { }
1st Floor: NE Wall - E	4	1 }			}
13th Floor: Center - S   7th Floor: Center - S   7th Floor: Near Center - S   1st Floor: NE Wall, W. End - Up   Structure Reference Orientation: N=40°   1st Floor: NE Wall, E. End - Up   Structure Reference Orientation: N=40°   1st Floor: NE Wall, E. End - Up   Structure Reference Orientation: N=40°   1st Floor: NE Wall, E. End - Up   Structure Reference Orientation: N=40°   1st Floor: NE Wall, E. End - Up   Structure Reference Orientation: N=40°   1st Floor: NE Wall, E. End - Up   Structure Reference Orientation: N=40°   1st Floor: NE Wall, E. End - Up   Structure Reference Orientation: N=40°   1st Floor: NE Wall, E. End - Up   1st Floor: NE Wall, E. End - Up   Structure Reference Orientation: N=40°   1st Floor: NE Wall, E. End - Up   1st Floor: NE Wall, E. End - Up   Structure Reference Orientation: N=40°   1st Floor: NE Wall, E. End - Up   Structure Reference Orientation: N=40°   1st Floor: NE Wall, E. End - Up   Structure Reference Orientation: N=40°   1st Floor: NE Wall, E. End - Up   Structure Reference Orientation: N=40°   1st Floor: NE Wall, E. End - Up   Structure Reference Orientation: N=40°   1st Floor: NE Wall, E. End - Up   1st F	က	Floor: NE Wall —			}
13th Floor: Center — S  7th Floor: Near Center — S  1st Floor: NE Wall, W. End — Up  1st Floor: NE Wall, E. End — Up  1st Floor: NE Wall, E. End — Up  0 1 2 3 4 5 10 10 15	14	1			}
1st Floor: Near Center - S  1st Floor: NE Wall, W. End - Up  1st Floor: NE Wall, E. End - Up  2structure Reference Orientation: N=40°  1st Floor: N=	10	- [			s
1st Floor: New Mall, W. End - Up  1st Floor: NE Wall, E. End - Up		Center -			}
1st Floor: NE Wall, W. End - Up  1st Floor: NE Wall, E. End - Up  Structure Reference Orientation: N=40°  0 1 2 3 4 5 10		Floor: Near Center -			}
1st Floor: NE Wall, E. End - Up  Structure Reference Orientation: N=40°  0 1 2 3 4 5 10	2	W. End - Up			
Structure Reference Orientation: N=40°  1 2 3 4 5 10 10 20		End – Up			}
				! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! !	1 1
		1 2 3 4 5	         	           	22 Sec.

Orientation: N=3550 49th Floor Plan 8 Structure Reference Roof Plan 57' ,01 35th Floor Plan 14th Floor Plan 22nd Floor Plan 5 12/ 156' Outrigger Frames Braced Frame 126, SENSOR LOCATIONS **Level Plan** "A" Level Plan 2631 Perimeter Columns outrigger moment frames. 'n Design date: 1988 Los Angeles - 52-story Office Bldg. **Building Core** Building Projection frames and 30th Braced steel (CSMIP Station No. 24602) 40th 50th 45th 35th 25th 20th 15th 2nd 10th 5th Roof W/E Elevation 19' 25' 44 6 13,

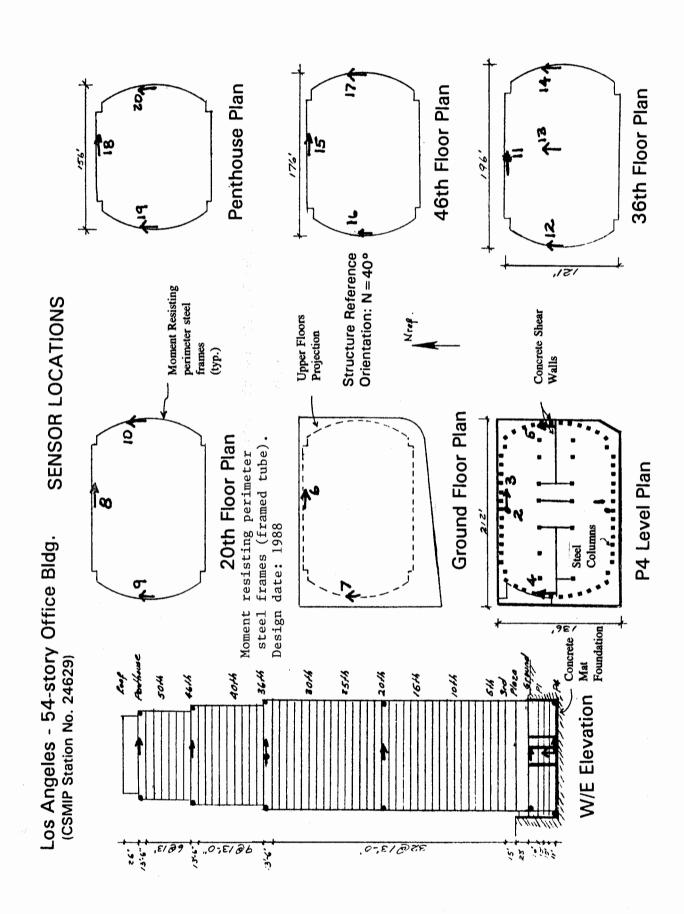
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Los Angeles — 52—story Office Bldg. (CSMIP Station 24602)	20 Roof: Center - N	17 49th Floor: Center - N	18 49th Floor: E. Wall - N	14 35th Floor: Center - N	15 35th Floor: E. Wall - N	11 22nd Floor: Center - N	12 22nd Floor: E. Wall - N	9 14th Floor: Center - N	6 Level A: Center of Tower - N	7 Level A: E. End of Tower - N	3 Level E: Center of Tower - N	4 Level E: E. End of Tower - N		2 3 4 5	This page plotted

<b></b> J	Los Angeles — 52—story Office Bldg.  (CSMIP Station 24602)	
19	Roof: Cent	$\geq$
16	49th Floor: Center - E	ζ (
13	35th Floor: Center – E	<u>}</u>
10	22nd Floor: Center – E	کم
œ	14th Floor: Center - E	? }
2	Level A: Center of Tower - E	{
2	Level E: Center of Tower - E	,
<b>—</b>	Level E: Center of Tower - Up	}
	Structure Reference Orientation: N=355°	!
		22 Sec.
	This page plotted with 4.0x vertical exaggeration.	

2-92189.05	Max. Accel. = 0 10 g	0.05 g	0.06 9	0.04 g	0.05 g	0.05 g	0.06 9	0.05 g	0.04 g	0.05 g	0.03 g	0.03 g		44 Sec.
RECORD 24602-CS112-92189.05														40 exaggeration.
														30 plotted with 4.0x vertical 6
Office Bldg.			James		Monde				~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				30 This page plotted wit
s Angeles - 52-story Office (CSMIP Station 24602)			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				Mary Mary	Mumm			CANALANA AMARANAA		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	25 Thi
Los Ang (csmir	50	17	18	4 ^t	15 M	=	12		9	7	3	4	1 1	22

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s Angeles - 52-story Office (CSMIP Station 24602)		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		me Marketine					
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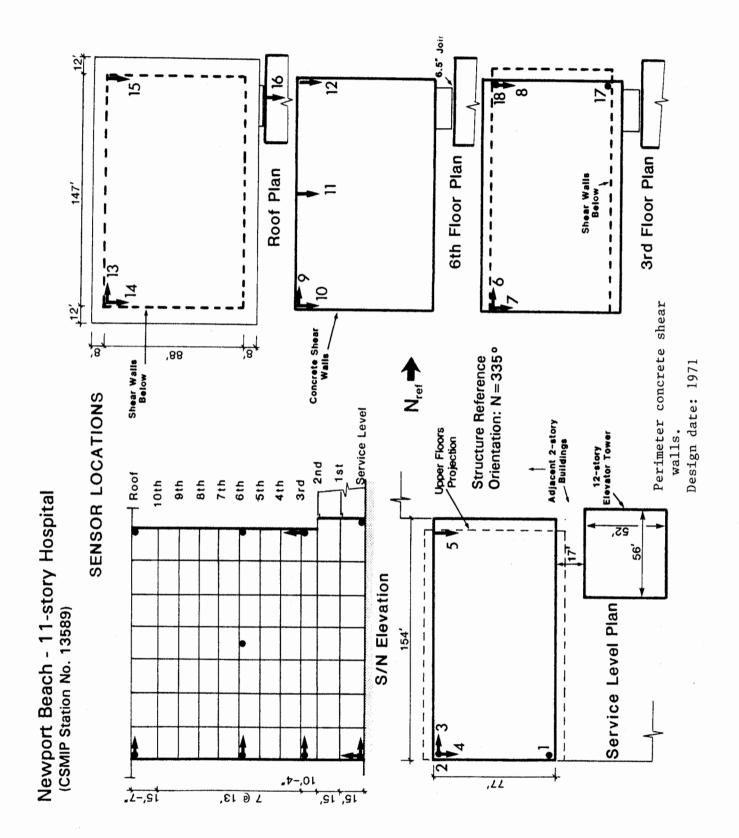


Los Angeles — 54—story Office Bldg. (CSMIP Station 24629)	RECORD 24629—CS125—92190.05
19 Panthouse: W Wall - N	
117	m
20 Penthouse: E. Wall - N	
16 46th Floor: W. Wall - N	}
17 46th Floor: E. Wall - N	
12 28th Floor, W Wall a M	
ממנון בוסמן: אי אמון	
13 36th Floor: Center - N	
14 36th Floor: E. Wall - N	
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
9 20th Floor: W. Wall → N	
10 20th Floor: E. Wall - N	
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
7 Ground Floor: W. Wall - N	~V.\/~/~~/~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
4 Level P4: W. Wall - N	
	~~~\\~\\~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
5 Level P4: E. Wall - N	
rientat	l
1 2 3 4 5	15 20 22 Sec.
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RECORD 24629-CS125-92190.05		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	J						 	20 22 Sec.
RECORD 24									Structure Reference Orientation: N=40°	Dlotted with 4.0x vertical exaggeration.
Los Angeles — 54—story Office Bldg. (CSMIP Station 24629)	18 Penthouse: N. Wall — E	15 46th Floor: N. Wall - E	11 36th Floor: N. Wall - E	8 20th Floor: N. Wall - E	6 Ground Floor: N. Wall - E	3 Level P4: N. Wall - E	2 Level P4: N. Wall - Up	1 Level P4: S. Wall - Up	1	This Dage

92190.05	Accel. = 0.06 g	0.07 g	0.03 g	0.05 g	0.03 g	0.03 g	0.03 g	0.04 g	0.05 g	0.03 g	0.03 g	0.03 g	44 Sec.
RECORD 24629-CS125-92190.05	Max.												aggeration.
													30 30 plotted with 4.0x vertical exaggeration.
fice Bldg.			~~~~~					~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		- i -
eles - 54-story Office Station 24629)													
Los Angeles (CSMIP Stati	19	20	16	17	12 -m	13	41	6 m	10	7 Sommond	4 ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	5	22

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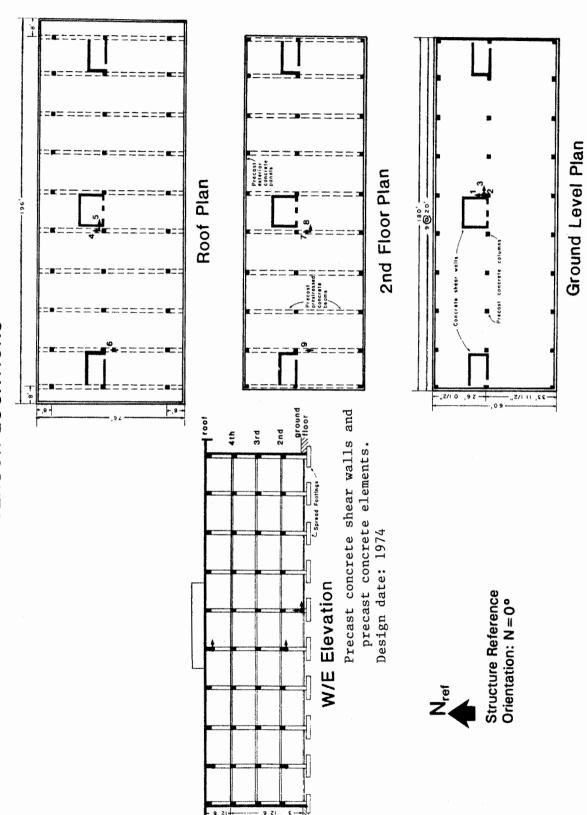


Z	Newport Beach — 11—story Hosp (CSMIP Station 13589)	spital	RECORD 13589-CS108-92184, 10	
7				 - -
-	'			}
15	Roof: NW Corner E			{
16	Roof Level, Adjacent Elevator Tower - E		July of the sound	
10	6th Floor: SW Corner - E			
1	6th Floor: Center of West Wall — E			
12	6th floor: NW Corner — E			
7	3rd Floor: SW Corner — E			}
80	3rd Floor: NW Corner — E			
4	Service Level: SW Corner - E			
2	Service Level: NW Corner - E			}
13	Roof: SW Corner - N			\$ <
6	8th floor: SW Corner — N			<i>)</i>
9	3rd Floor: SW Corner — N)
က	Service Level: SW Corner- N			
18	3rd Floor: NW Corner — Up			}
17	3rd Floor: NE Corner — Up			
2	Service Level: SW Corner - Up			
~	Service Level: SE Corner - Up			
	1 1 1 1 1	Structure Reference Orientation: N	N=335°	1
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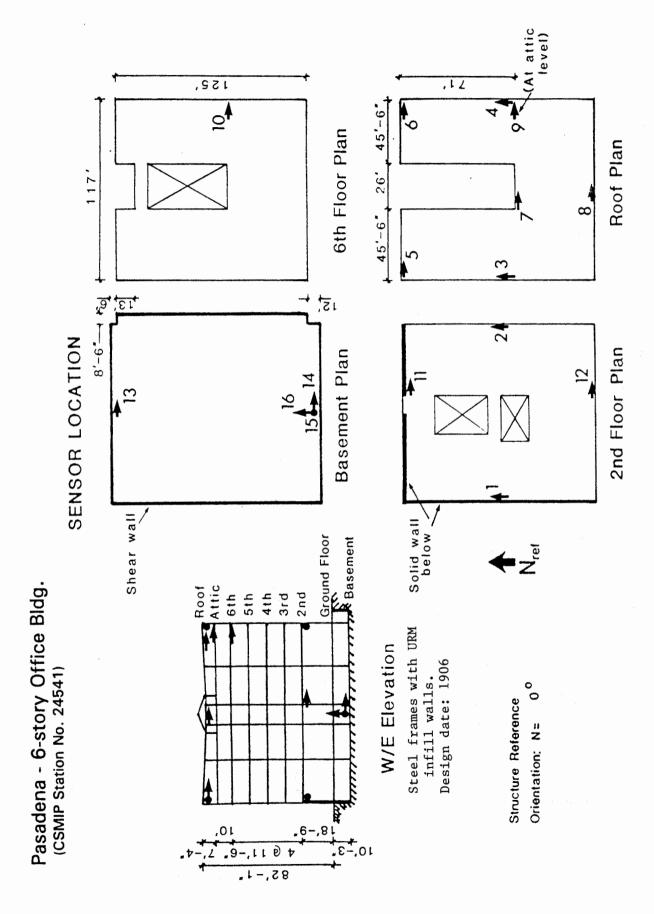
Newport Beach — 11 (CSMIP Station 13589)	—story Hosp	ital	RECORD 1	RECORD 13589—CS108—92184.10	
**************************************				Max. Accel.= 0.10	0.10 g
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01	,			0.07	7 g
11				0.09	Б 6
12				0.09	9 g
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8				0.07	7 g
4				0.04	4 9
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				0.07	7 g
9				0.06	6 g
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Palm Desert - 4-story Medical Office Bldg. (CSMIP Station No. 12284)





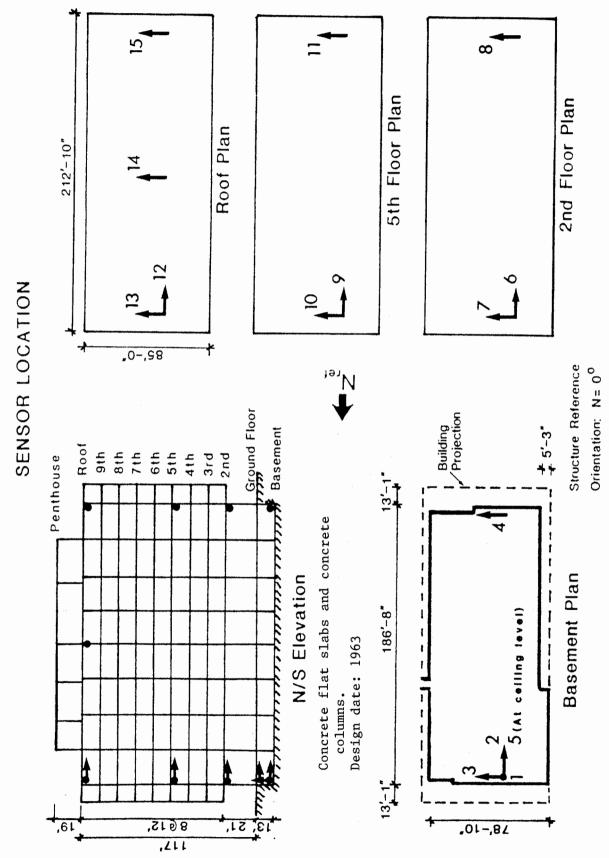
Palm Desert - 4-story Medical Office (CSMIP Station 12284)	Bldg. Record 12284-C0132-92180.08
1 Ground Floor - N	Max. Accel. = 0.07 g
2 " – Up	0.04 g
3 " – E	g 90.0
4 Roof: Center - N	80.08 g
5 " Center - E	
6 " West Wall - N	B 60.0
7 2nd Floor: Center - N	0.07 B
8 " Center - E	8 90°0
9 " West Wall - N	0.07 g
0 1 2 3 4 5	Structure Reference Orientation: N=0° $15 \hspace{1cm} 20 \hspace{1cm} 22 \hspace{1cm} \mathrm{Sec.}$



Pasadena - 6-story Office Bldg. (CSMIP Station 24541)	Record 24541-C0281-92183.03
1 2nd Floor: W. Wall - N	Max. Accel. = 0.03 g
2 " E. Wall - N	0.03 g
3 Roof: W. Wall - N	9.00
4 " E. Wall - N	0.03 g
5 Roof: N. Wall of W. Wing - E	0.05 g
6 " N. Wall of E. Wing - E	0.05 g
7 " Interior Wall, Center - E	0.05 g
8 " S. Wall, Center - E	0.04 g
9 Attic Level: W. Wall, Center - E	0.03 g
10 6th Floor: E. Wall, Center - E	0.04 g
11 2nd Floor: N. Wall - E	0.03 g
12 " S. Wall - E	0.03 g
13 Basement: N. Wall - E	0.05 g
Structure Refe	
1 2 3 4 5	20 22 Sec.

20 22 Sec.		0 1 1 2 2 3 6 4 6 5 6 6
1	Structure Reference Orientation: N=0°	
0.03 g		N
0.03 g		15 " - Up
Max. Accel. = 0.03 g		14 Basement: S. Wall - E
Record 24541-S1869-92183.03		(CSMIP Station 24541)
Record 24541-S1869-92183.03		Pasadena - 6-story Office Bldg.

Pasadena - 9-story Commercial Bldg. (CSMIP Station No. 24571)



RECORD 24571-CD112-92184.05

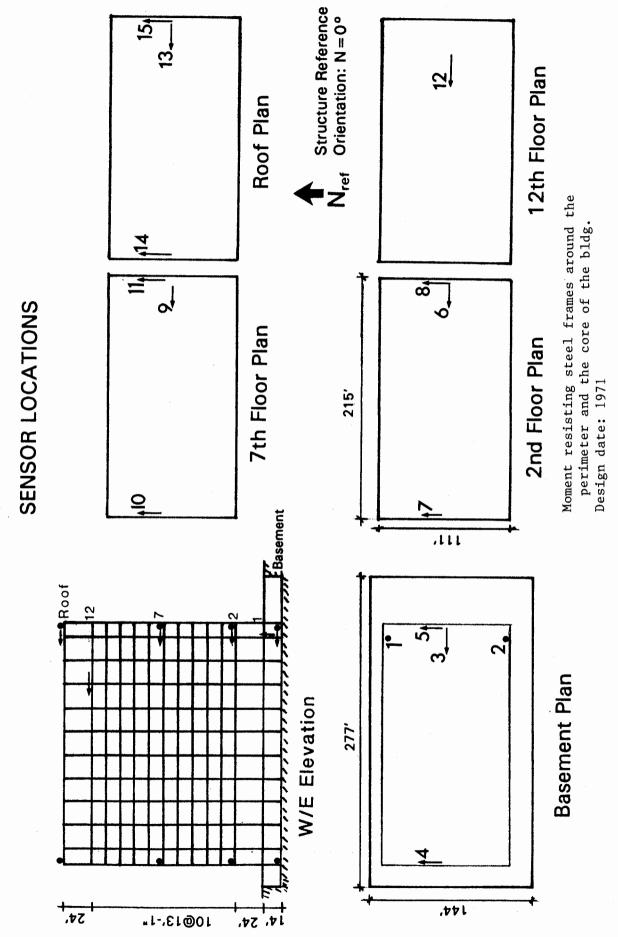
Pasadena — 9—story Commercial Bldg. (CSMIP Station 24571)

	many many many						~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~					N=0°	
												Structure Reference Orientation:	10 10
13 Roof: N. End – E	14 Roof: Center - E	15 Roof: S. End – E	10 5th Floor: N. End - E	11 5th Floor: S. End - E	7 2nd Floor: N. End - E	8 2nd Floor: S. End – E	4 Basement: S. Wall - E	12 Roof: N. End – S	9 5th Floor: N. End - S	6 2nd Floor: N. End - S	5 Ground Floor: N. Wall - S		2 3 4 5

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0.05 g 0.04 g 0.03 g 0.04 g 0.06 g 0.04 g 0.04 g Max. Accel. = 0.04 g0.03 0.03 RECORD 24571-CD112-92184.05 This page plotted with 4.x vertical exaggeration. Pasadena — 9—story Commercial Bldg. (CSMIP Station 24571) 10

Pasadena - 12-story Commercial/Office Bldg. (CSMIP Station No. 24546)



Bldg.	
Commercial/Office	
Pasadena — 12—story	(CSMIP Station 24546)

RECORD 24546-CD270-92183.03

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Structure Reference Orientation: N=0°

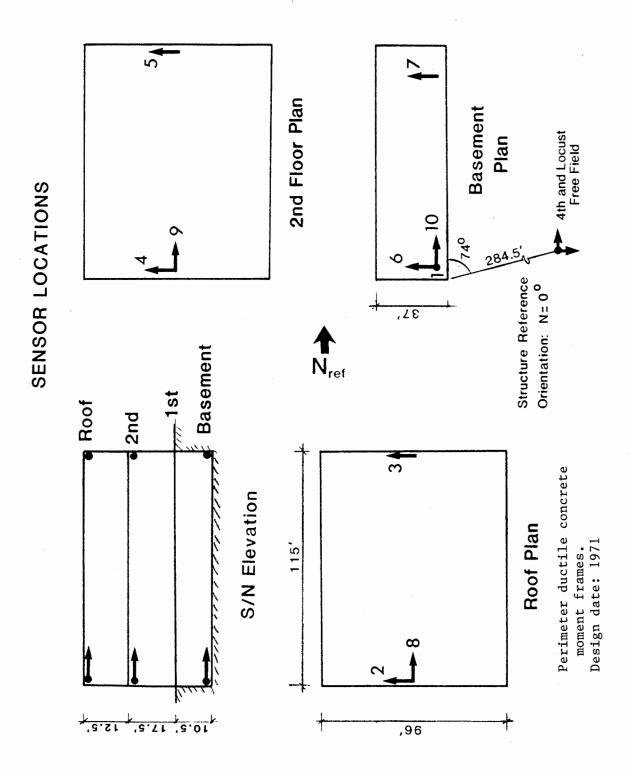
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					0.04 g
					0.05 g
					0.04 g
	Many				
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25 35 40 40 40 40 40 40 40 40 40 40 40 40 40					. 04 g
30 35 40	1 1 1 1	1 1 1 1 1	1 1 1 1 1 1	1 1 1	I
	25		35	l l	44 Sec.

6" Seismic Joint Adjacent Buildings 6" Seismic Joint 6th Floor Plan Roof Plan 118.22 5th Floor Plan 22.811 resisting steel frames. Orientation: N= 0° Structure Reference 11 Distributed moment Design date: 1972 SENSOR LAYOUT ∞ Ground Floor Roof 11.15 '98.45 01 ,95 31.11 Pasadena - 12-story Office Bldg. 56 **Ground Floor Plan** 28, (CSMIP Station No. 24566) 237.74 S/N Elevation 26, 56, 10.63 15 6 14, = 168, ,89L

22 Sec. RECORD 24566-CD110-92184.04 System undergoing testing and recalibration at time of report preparation. Pasadena — 12—story Office Bldg. (CSMIP Station 24566) 15 14 13 10 7 12 9 က 2 σ ∞

Pasadena — 12—story Office Bla (CSMIP Station 24566)	ldg.	RECORD 245	RECORD 24566—CD110—92184.04
			Max. Accel.= 0.09 g
			0.16 g
			0.09
			0.14 g
			0.12 g
			0.08 g
			0.14 9
			0.13 g
			0.05 g
			0.05 g
			0.06 g
			0.05 g
			0.14 g
			0.04 g
			0.06 g
		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1
25	30	35 40	44

Pomona - 2-story Commercial Bldg. (CSMIP Station No. 23511)



Pomona - 2-story Commercial Bldg. (CSMIP Station 23511)	Record 23511-C0117-92185.04
1 Basement: SE Corner - Up	Accel. = 0.02 g
2 Roof: South Wall - W	0.08
3 " North Wall - W	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
4 2nd Floor: South Wall - W	0.05 g
5 " North Wall - W	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
6 Basement: SE Corner - W	0.02 g
7 " NE Corner - W	0.03 g
8 Roof: South Wall - N	0.06 g
9 2nd Floor: South Wall - N	0.03
	0.02 g
H T	
	20 22 Sec.

Pomona - 6-story Commercial Bldg.

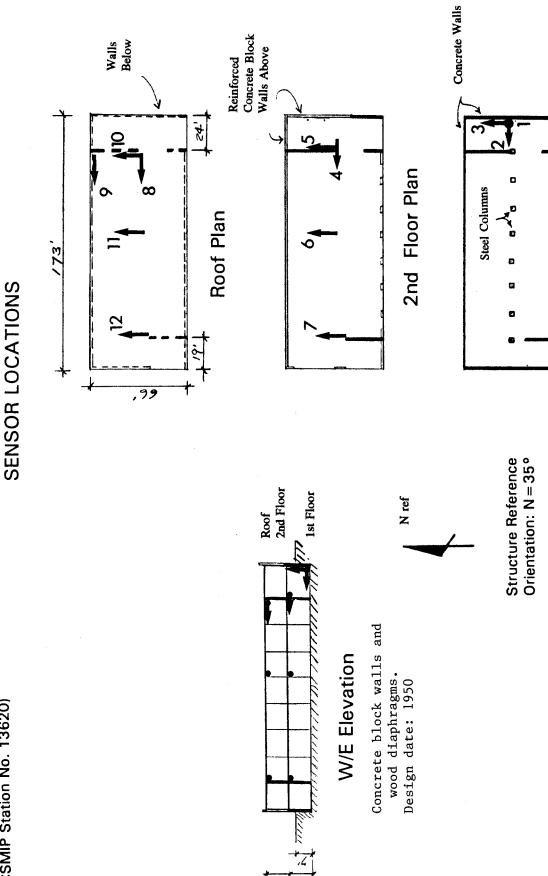
Building Projection Upper Floors

- Projection 25'-9" 10**/** 7 8 Roof Level Plan **Basement Plan** 2nd Floor Plan 44'-10" 119'-8" 49'-1" SENSOR LOCATIONS .01-,19 **"**⊅-'S7 N_{ref} Basement Mezzanine 1st Roof 2nd 5th 4th 3rd Reinforced concrete frames with URM infill walls. Design date: 1923 Orientation: N= 0 0 Structure Reference Pent House S/N Elevation (CSMIP Station No. 23544) 15,-e, 13, 3 ,12

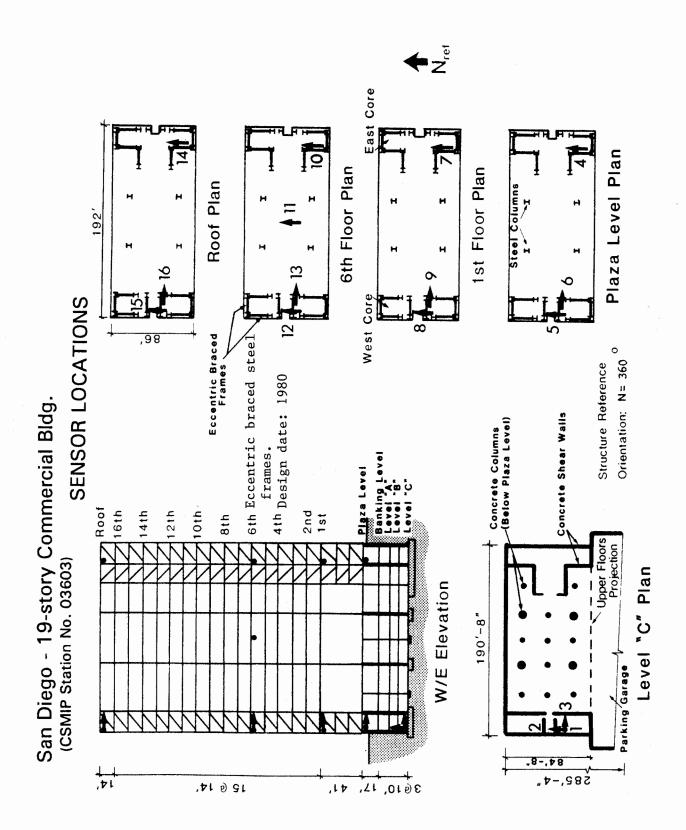
Record 23544-C0108-92185.04													ure Reference Or	10 15 20 22 Sec.
Pomona - 6-story Commercial Bldg. (CSMIP Station 23544)	l Basement: Norht Wall - Up	2 Roof: Norht Wall - S	3 " West Wall of South Wing - S	4 "West Wall of North Wing - S	5 2nd Floor: North Wall - S	6 Basement: North Wall - S	7 Roof: South Wall - W	8 " North Wall - W	9 2nd Floor: South Wall - W	10 " North Wall - W	11 Basement: South Wall - W	12 " North Wall - W	` (0 1 2 3 4 5

Record 23544-C0108-92185.04	Max. Accel. = 0.02 g	0.06 g	g 80.0	0.10 g	0.04 g	0.03 g	0.09 g	0.07 g	0.05 g	0.03 g	0.02 g	1
												35
. Bldg.												30
Pomona - 6-story Commercial Bldg. (CSMIP Station 23544)	+											25

Riverside - 2-story Govt. Office Bldg. (CSMIP Station No. 13620)



1st Floor Plan



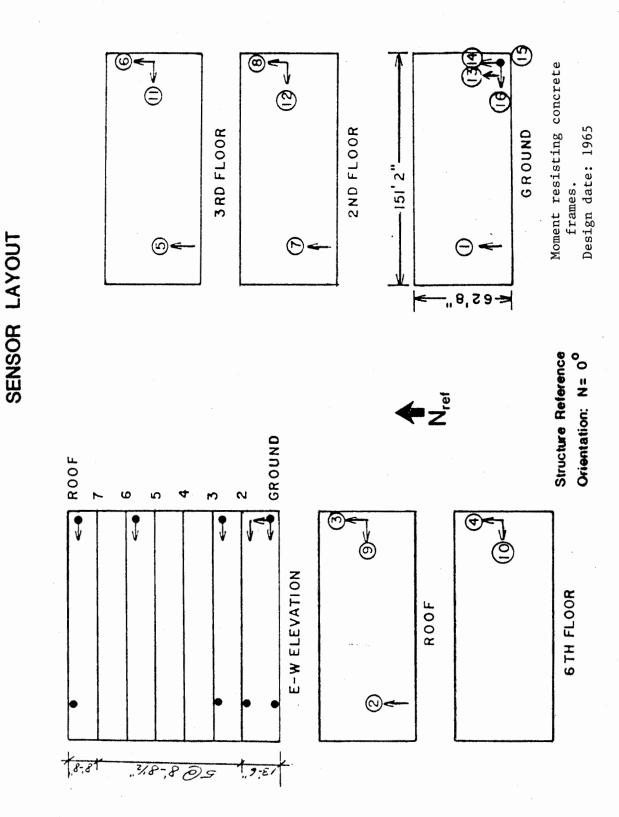
RECORD 03603-CS114-92224.08																		15 20 22 Sec.
rcial Bldg.																	Structure Reference Orientation: N=0°	10
San Diego — 19—story Commercia (CSMIP Station 03603)	16 Roof: West Core - E	13 6th Floor: West Core — E	9 1st Floor: West Core — E	6 Plaza Level: West Core - E	3 Level C: West Core - E	15 Roof: West Core - N	14 Roof: East Core - N	12 6th Floor: West Core - N	11 6th Floor: Center - N	10 6th Floor: East Core - N	8 1st Floor: West Core - N	7 1st Floor: East Core - N	5 Plaza Level: West Core - N	4 Plaza Level: East Core - N	2 Level C: West Core - N	1 Level C: West Core — Up		1 2 3 4 5

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San Diego — 19—story (CSMIP Station 03603)	tory Commercial Bldg. 13)		8114-9222	
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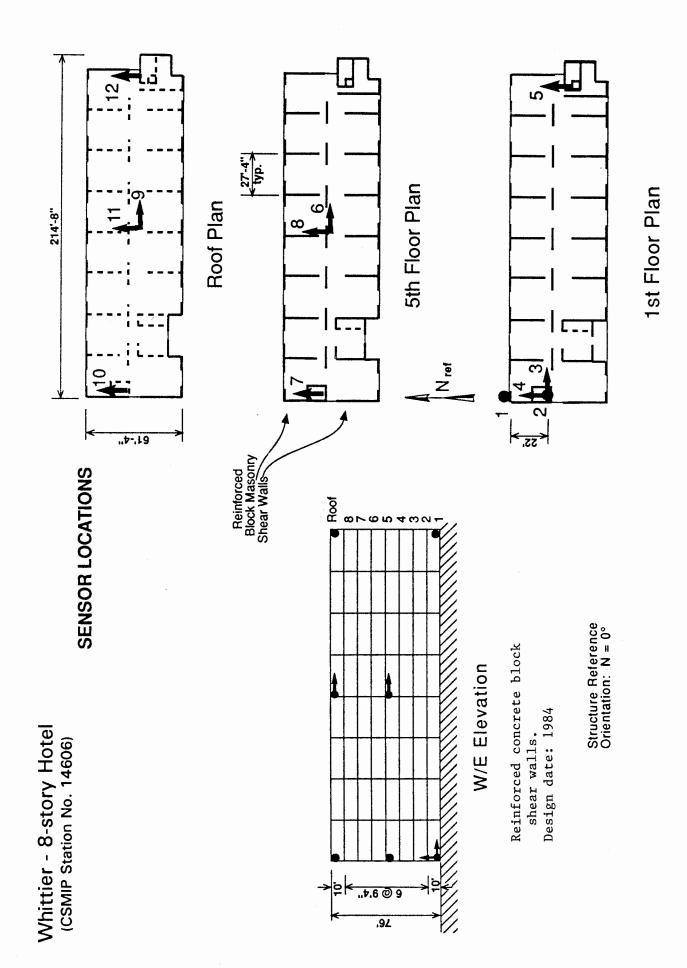
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Van Nuys - 7-story Hotel (CSMIP Station No. 24386)



Van Nuys - 7-story Hotel (CSMIP Station 24386)	Reco	Record 24386-C0198-92192.03
1 Ground Floor: Near SW Corner - N		Max. Accel. = 0.02 g
2 Roof: Near SW Corner - N		0.06 g
3 " East Wall - N		0.05 g
4 6th Floor: East Wall - N		0.05 g
5 3rd Floor: SW Corner - N		0.04 g
6 " East Wall - N		0.03 g
7 2nd Floor: Near SW Corner - N		0.03 g
8 " East Wall - N		0.04 g
9 Roof: East Wall - W		0.06 g
10 6th Floor: East Wall - W		0.05 g
11 3rd Floor: East Wall - W		0.04 g
12 2nd Floor: East Wall - W		0.03 g
13 Ground Floor: SE Corner - N		0.02 g
Structure Reference	Reference Orientation: $N=0^\circ$	
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	!					Structure Reference Orientation: N=0°	
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Hotel 24386	 	E Cor	= {		= {		, 4
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- /-si Stai		F1001			}		2
Van Nuys - /-story Hotel (CSMIP Station 24386)	۱, ۱,	14 Ground Floor: SE Corner - N	= {		= {		1 -
Van	 	14 G	15		16		0



Whit (cs	Whittier — 8—story Hotel (CSMIP Station 14606)	RECORD 14606-CS118-92189.09
10 Roo		
11 Roo	Roof: Center - N	My M
12 Roo	Roof: SE Wall - N	
7 5th	5th Floor: NW Wall - N	
8 5th	5th Floor: Center - N	monday of for the sound of the
4 1st	1st Floor: NW Wall - N	
5 1st	1st Floor: SE Wall - N	}
9 Roo	Roof: Center - E	
6 5th	th Floor: Center - E	M A M A M
3 1st	1st Floor: NW Wall - E	A. A
2 1st	1st Floor: NW Wall, S. End - Up	
135	1st Floor: NW Wall, N. End - Up	
l· I	Structure Reference Orientation: N=0°	
0		

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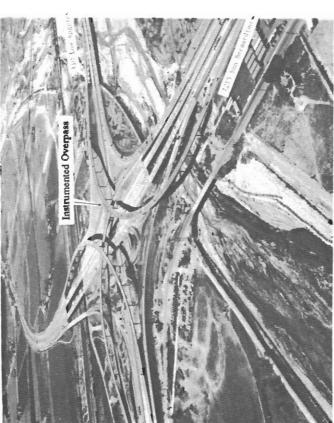
Whittier — 8—story Hotel (CSMIP Station 14606)	RECORD 14606—CS118—92189.09
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12 Mondrown When Mrs	0.10 g
The second of th	0.06 g
8 Marrow My Marrow Law Law Wald Law Marrow L	0.06 g
4 monorally the company of the compa	0.03 g
5 more desproaghed for the formal polyments of the for	0.04 g
a Mydylly Myddyn e	0.11 g
6 WALAWAYNYMANAMANANANANANANANANANANANANANANANA	0.06 g
3 Monowy Woody Woody Woody Woody Woody Woody Woody	0.03 g
2 VANDAMANAMANAMANAMANAMANAMANAMANAMANAMANA	0.03 g
1 sometiment of the second of	0.03 g
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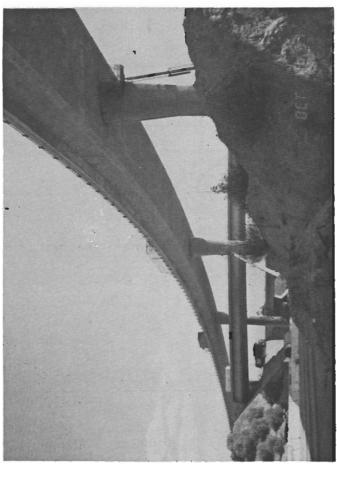
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INDEX TO LIFELINE STRUCTURE RECORDS

Station	Page
San Bernardino - I-10/215 Interchange	211
Cogswell Reservoir - Cogswell Dam	219
Lake Mathews - Main Dam	. 222
Lake Mathews - Dike 1	223
Etiwanda - Power Plant	225
Lancaster - Airport Control Tower	. 227

San Bernardino - I10/215 Interchange (CSMIP Station No. 23631)





View of Bents 4, 5 and 6

No. of Spans: 16 Total Length: 2540′± Width of Deck: 41′

Plan Shape: Curved Design Date: 1969

Construction Date: 1973

Note: In 1991, the bridge was retrofitted by adding 3/8" steel casing to columns, replacing restrainers at hinges, retrofitting footings and abutments.

Superstructure Type:

Multi-cell prestressed concrete box girders; six structures connected by hinges with cable restrainers.

Substructure Type:

Total of 15 single concrete columns, 8'x5.5' octagonal section; column height varies from 38 to 89 feet.

Foundation Type:

Spread footings supported by concrete piles.

.8 .8-,99 Adultrent Bent 8 20'-5" Conc. pedestal T24'-5" Note: Sensors 18 & 20 are located near the hinge, 20' from the bent. ¹756′ 131, Foundation Level Plan **HIDGe** Deck Level Plan Bent 8 Elevation 1150 8 Juag 2540'± 19 Bent 5 Bent 5 THERLITTER Bent 3 ETUBA **Alinge** 24/H

San Bernardino - I10/215 Interchange

RECORD 23631-CS117-92180.09	more more many for formal formand form		Mary Mary My My My Mary Mary Mary Mary M	ment from the property of the	The second of th	I work for the form the form of the form o			was a superfection of the	Contraction of the section of the se	www.payMayMayMayMayMMMMMMmayMaryMayMayMayMayMayMayMayMayMayMayMayMayMay	way William Wally May Many Man Mars and recommen	WWwalkhall Bardharman papalanghappanghappananananan wandaga wara	15 20 22 Sec.
San Bernardino — I10/215 Interchange (csMIP station 23631)	1 West Abutment - L*	2 West Abutment - Up	3 West Abutment - T	10 Hinge Near Bent 3, W. Side - L	7 Hinge Near Bent 3, W. Side - T	8 Hinge Near Bent 3, E. Side - T	4 Bent 3, Footing - L	6 Bent 3, Footing - T	11 Deck Between Bents 5 and 6, Mid-Span - T	9 Bent 7, Deck - Up	14 Deck Between Bents 7 and 8, Mid-Span - U	15 Hinge Near Bent 8, N. Side - Up Drawnanger and March Marc	16 Hinge Near Bent 8, S. Side - Up Warman Mynnown word flather Monday May Wall May Warmy Myn Man May Mary Warms.	0 1 2 3 4 5

Bent 8, Deck, S. Side - Up missing when we was an an an and the properties of the properties monounement would be productioned by from the post of the office of the Money productions when the second of the s RECORD 23631-CS117-92180.09 and the second of the second o San Bernardino - I10/215 Interchange W. Side - T Hinge Near Bent 10, E. Side - T Side - L* **⊢** Side - L Side - T Bent 8, Footing, S. Side - Up Bent 8, Footing, N. Side - Up Side - T Side - L Side N. Side - Up (CSMIP Station 23631) ≆ . ليا ≥. نیا ŝ Hinge Near Bent 10, ś Hinge Near Bent 8, Hinge Near Bent 8, φ, Hinge Near Bent 8, Footing, Bent 8, Footing, Hinge Near Bent Deck, Bent 8, Bent 8, 20 26 25 9 23 24 17 3 12 22 <u>1</u>3 S

San Bernardino — I10/215 Interchange (CSMIP Station 23631)

RECORD 23631-CS117-92180.09

Bridge reference FF record shown on page 62.

^{*} L - parallel to bridge, T - transverse to bridge.

San Bernardino — I10/215 Interc (CSMIP Station 23631)	change	RECORD 2	RECORD 23631—CS117—92180.09
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, American many, s			0.48 g
4			0.09
9			0.11
11			0.28
6			0.17 g
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16 Jany My Jary Jary Marine Ma			0.33 g
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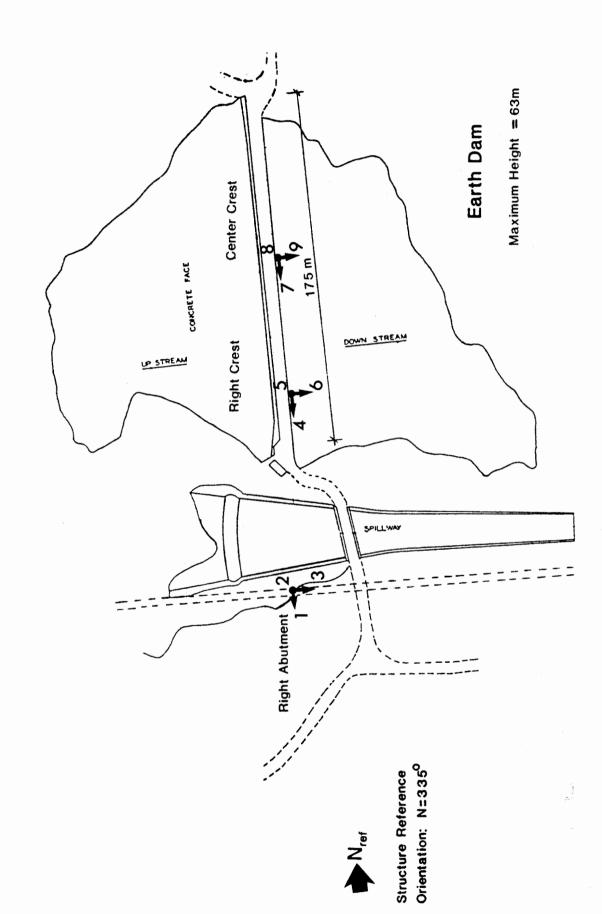
RECORD 23631-CS117-92180.09		0.23 g	0.08 g	0.08 g	0.34 g	0.58 g	0.25 g	0.51 g	0.33 g	0.15 g	0.29 g	0.25 g	40 44 Sec.
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San Bernardino — I10/215 (CSMIP Station 23631)		سىرىسىدىمىمىمىمىمىمىمىلىسىدىمىمالىمىمالىم											25
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0.42 g 0.68 g 0.30 g 0.41 g 1.02 g 0.67 g 0.23 g 0.11 g 0.20 g Max. Accel.= RECORD 23631-CS117-92180.09 San Bernardino — I10/215 Interchange (csMIP Station 23631) 22 30 31 32 34 35 59 28 33

Cogswell Reservoir - Cogswell Dam



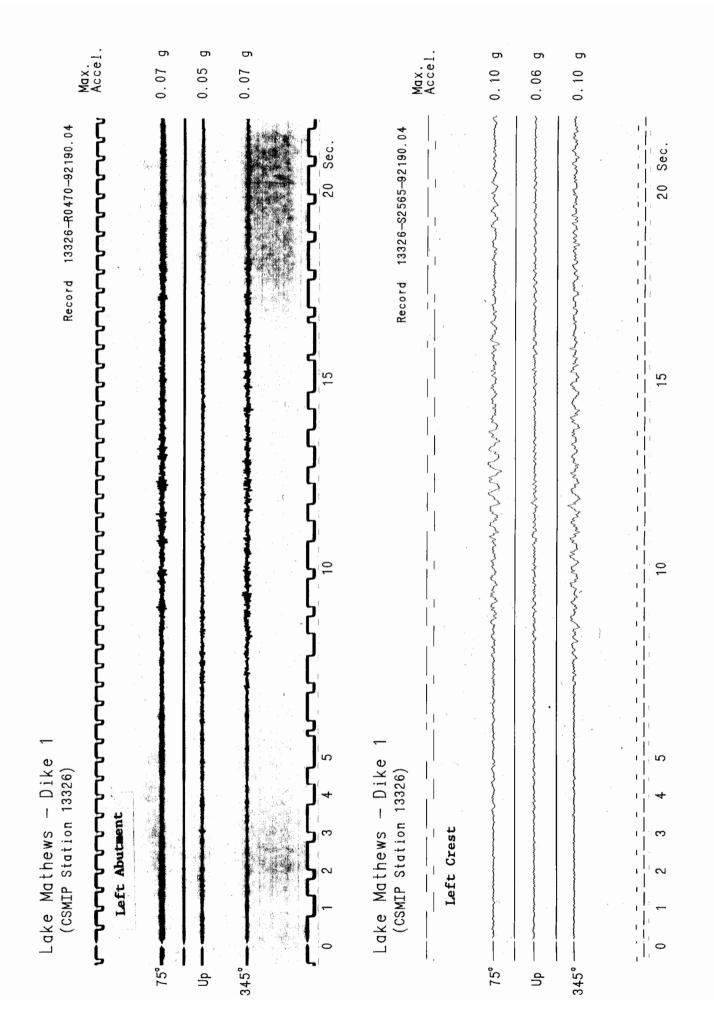
SENSOR LOCATIONS

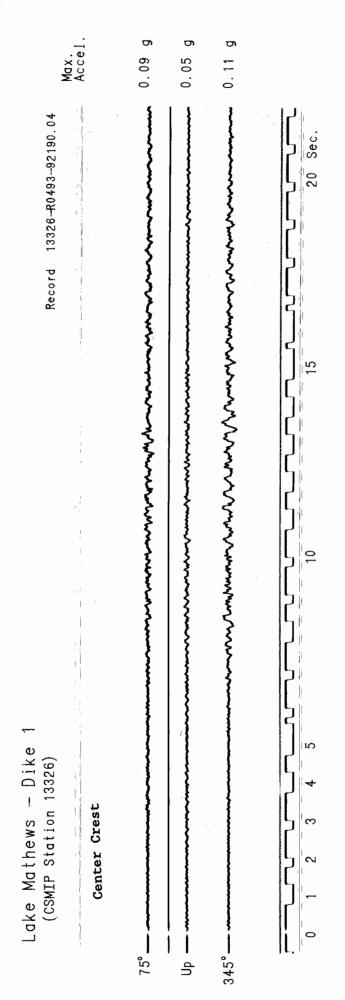


Max.	Accel.	0.03 9	0.02 g	0.04 g			Max.	Accel.	0.08 g	0.04 g	0.09 g	
ord 23210-\$1867-92191.05							ord 23210-S1680-92191.05	 - - - -	\-\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	20 Sec.
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Cogswell Dam (CSMIP Station 23210)	Center Crest	155°	Up	65° — — — — — — — — — — — — — — — — — — —		0 1 2 3 4 5

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Lake Mathews — Main Dam (CSMIP Station 13313)	Right Crest				0 1 2 3 4 5	Lake Mathews - Main Dam (CSMIP Station 13313)	Left Crest					0 1 2 3 4 5
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Plant Record 23466-S3500-92182.03 Max. Max.	ame	0.04 g	0.05 g		5 10 20 Sec. Plant	Record 23466-S3499-92182.03 Max.	10 g	TO 9		5 15 15 20 Sec. 20 Sec.
Etiwanda — Power Plant (CSMIP Station 23466)	2nd Floor or	80°—	Up	.06	0 1 2 3 4 5 Etiwanda — Power Plant		180°		,06	

23466-S3494-92182.03 Max.	0.03 g	0.03 g	0.05 g	20 Sec. 23466-S3497-92183.03 Max.	Accel.	0.07 g	20 Sec.
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qtion 23466)	Ground Floor of Control Bldg.			3 4 5 Power Plant on 23466)	of Control Bldg.		3 4 5
(CSMIP Station 23466)	Ground Flo	up ————————————————————————————————————	060	Etiwanda — Power Plant (CSMIP Station 23466)	2nd Floor	90° — ""	0 1 2

Dom Roof: W. Wall - Up E. Wall - N E. Wall - N On Floor: W. Wall - N On Floor: S. Wall - E Structure Reference Orientation: N=330° Structure Reference Orientation: N=330°
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ucture Reference Orientation: N=330°
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W. Wall - E Structure Reference Orientation: N=330°
Structure Reference Orientation: N=330°
Structure Reference Orientation: N=330°
22 Sec. 2 4 15 2 16 2 2 Sec.

LIST OF CSMIP REPORTS AND DATA TAPES

California Department of Conservation Division of Mines and Geology Office of Strong Motion Studies California Strong Motion Instrumentation Program (CSMIP)

AVAILABLE REPORTS:

	Title	Number
I.	Earthquake Data Reports:	
	CSMIP Strong-Motion Records from the Landers, California Earthquakes of June 28, 1992	OSMS 92-09
	CSMIP Strong-Motion Records from the Petrolia, California Earthquakes of April 25-26, 1992	OSMS 92-05
	Quick Report on CSMIP Strong-Motion Records from the April 22, 1992 Desert Hot Springs, California Earthquake	OSMS 92-03
	Summary of CSMIP Strong-Motion Records for the August 17, 1991 Earthquake near Petrolia, California	OSMS 91-09
	CSMIP Strong-Motion Records from the Sierra Madre, California Earthquake of 28 June 1991	OSMS 91-03
	Quick Report on CSMIP Strong-Motion Records for the February 28, 1990 Earthquake near Upland, California	OSMS 90-02
	CSMIP Strong-Motion Records from the Santa Cruz Mountains (Loma Prieta), California Earthquake of 17 October 1989	OSMS 89-06
	CSMIP Strong-Motion Records from the Superstition Hills, Imperial County, California Earthquakes of 23 and 24 November 1987	OSMS 87-06
	CSMIP Strong-Motion Records from the Whittier, California Earthquake of 1 October 1987	OSMS 87-05
	CSMIP Strong-Motion Records from the Chalfant Valley, California Earthquakes of July and August 1986	OSMS 86-06
	CSMIP Strong-Motion Records from the Palm Springs, California Earthquake of 8 July 1986	OSMS 86-05
	Selected Accelerograms from the Redlands, California Earthquake of October 2, 1985	OSMS 85-02
	CSMIP Strong-Motion Records from the Bishop, California Earthquake of 23 November 1984	OSMS 84-12

Title	Number
CDMG Strong-Motion Records from the Morgan Hill, California Earthquake of 24 April 1984	OSMS 84-7
Preliminary Summary of CDMG Strong-Motion Records from the 2 May 1983 Coalinga, California Earthquake	OSMS 83-5.2
Strong-Motion Records from the Mammoth Lakes, California Earthquake of 6 January 1983	OSMS 83-1.1
Strong-Motion Records Recovered from the Mammoth Lakes, California Earthquake of 30 September 1981	OSMS 81-10.1
Strong-Motion Records Recovered from the Westmorland, California Earthquake of 25 April 1981	OSMS 81-5.1
Strong-Motion Records Recovered from the Trindad-Offshore, California Earthquake of 8 November 1980	OSMS 80-11.1
Strong-Motion Records from the Livermore Earthquakes of 24 and 26 January 1980	PR 28
Strong-Motion Records from the Mammoth Lakes Earthquakes of May 1980	PR 27
Compilation of Strong-Motion Records and Preliminary Data from the Imperial Valley Earthquake of 15 October 1979	PR 26
Compilation of Strong-Motion Records from the Coyote Lake Earthquake of 6 August 1979	PR 25
Compilation of Strong-Motion Records Recovered from the Bishop, California Earthquake of 4 October 1978	OSMS 78-7.1
Compilation of Strong-Motion Records Recovered from the Santa Barbara Earthquake of 13 August 1978	PR 22
Catalog of Strong Motion Accelerograph Records Recovered by Office of Strong Motion Studies before January 1, 1982	SR 154
Catalog of Strong Motion Accelerograph Records Recovered by Office of Strong Motion Studies During 1982	SR 154A
Processed Data Reports:	
Plots of the Accompany Tape: BERKELEY86 (Building Response Data Set)	OSMS 92-02
Plots of the Accompany Tape: SIERRAMADRE91-INT1 (Ground, Building, and Lifeline Structure Response Data Set)	OSMS 92-01
Plots of the Accompany Tape: PALMSPRINGS86-IB, and B (Building Response Data Set)	OSMS 91-16

Title	Number
Plots of the Accompany Tape: LIVERMORE80 (Ground and Building Response Data Set)	OSMS 91-15
Plots of the Accompany Tape: LEXINGTON88-89 (Lifeline Structure Response Data Set)	OSMS 91-14
Plots of the Accompany Tape: ALUMROCK88 (Building Response Data Set)	OSMS 91-13
Plots of the Accompany Tape: WHEELERRIDGE88 (Lifeline Structure Response Data Set)	OSMS 91-12
Plots of the Accompany Tape: CHALFANT86 (Ground and Lifeline Structure Response Data Set)	OSMS 91-11
Plots of the Accompany Tape: WHITTIER87-CALTECH (Ground Response and Building Response Data Set)	OSMS 91-10
Plots of the Accompany Tapes: LOMAPRIETA89-IL, and L (Lifeline Structure Response Data Set)	OSMS 91-08
Plots of the Accompany Tapes: LOMAPRIETA89-IB1, IB2, IB3, IIB1, IIB2, and IIIB (Building Response Data Set)	OSMS 91-07
Plots of the Accompany Tapes: LOMAPRIETA89-IG, and G (Ground Response Data Set)	OSMS 91-06
Third Interim set of CSMIP Processed Strong-Motion Records from the Santa Cruz Mountains (Loma Prieta) Earthquake	OSMS 90-05
Processed Strong-Motion Data from the Base-Isolated San Bernardino County Law &Justice Center for the Upland earthquake of February 28, 1990	OSMS 90-03
Second Interim Set of CSMIP Processed Strong-Motion Records from the Santa Cruz Mountains (Loma Prieta) Earthquake of October 17, 1989	OSMS 90-01
Plots of the Processed Data for the Interim Set of 14 Records from the Santa Cruz Mountains (Loma Prieta) Earthquake of October 17, 1989	OSMS 89-08
Processed Strong-Motion Data from the Whittier, California Earthquake of 1 October 1987; Part I Ground-Response Records	OSMS 89-03
The Cerro Prieto, Baja California Earthquake of February 6, 1987 and Processed Strong-Motion Data	OSMS 87-04
Processed Strong Motion Data from the Palm Springs Earthquake of 8 July 1986; Part I Ground-Response Records	OSMS 87-01
Processed Strong Motion Data from the San Salvador Earthquake of October 10, 1986	OSMS 86-07

Title	<u>Number</u>
Processed Data from the Strong-Motion Record Obtained at a Base-Isolated Building in Rancho Cucamonga, California during the Redlands Earthquake of 2 October 1985	OSMS 86-01
Processed Data from Strong-Motion Records of the Morgan Hill Earthquake of 24 April 1984: Part I Ground-Response Records	OSMS 85-04
Processed Data from Strong-Motion Records of the Morgan Hill Earthquake of 24 April 1984: Part II Structural-Response Records	OSMS 85-05
Processed Data from the Strong-Motion Records of the Imperial Valley Earthquake of 15 October 1979.	SP 65
Processed Data from the San Juan Bautista 101/156 Separation Bridge and the San Juan Bautista Freefield Records from the Coyote Lake Earthquake 6 August 1979	SP 64
Processed Data from the Gilroy Array and Coyote Creek Records, Coyote Lake, California, Earthquake 6 August 1979	PR 24
Processed Data from the Strong-Motion Records of the Santa Barbara Earthquake of 13 August 1978. (in three volumes)	SR 144
II. Other Reports:	
Standard Tape Format of CSMIP Strong-Motion Data Tapes	OSMS 85-03

AVAILABLE STRONG-MOTION DATA TAPES:

Tape Name	Description
PUGETSOUND65	Puget Sound, Washington Earthquake of 29 April 1965; Vol. 1, 2 and 3 data from two buildings.
SANTBARB78	Santa Barbara earthquake of 13 August 1978.
IMPERIAL79	Imperial Valley earthquake of 15 October 1979, County Services Bldg. and other CSMIP stations.
СОУОТЕ79А	Coyote Lake earthquake of 6 August 1979, Gilroy
СОУОТЕ79В	Array stations. Coyote Lake earthquake of 6 August 1979, San Juan
COYOTE79C	Bautista overpass and nearest free-field station. Coyote Lake earthquake of 6 August 1979, Halls Valley station.
LIVERMORE80	Livermore earthquakes of 24 and 27 January 1980; data from 5 ground-response and 2 buildings for the earthquake on the 24th and data from 6 ground-response and 2 buildings for the earthquake of the 27th.
MAMMOTH80A	Mammoth Lakes earthquakes of 25 May 1980 at 09:34 and 09:49 PDT.
MAMMOTH80B	Mammoth Lakes earthquakes of 25 May 1980 at 12:45 and 13:36 PDT.
MAMMOTH80C	Mammoth Lakes earthquakes of 26 May 1980 at 11:58 PDT and 27 May 1980 at 07:51 PDT.
WESTMOR81	Westmorland earthquake of 26 April 1981.
COALINGA83	Coalinga earthquake of 2 May 1983, 16:43 PDT; Vol. 2 and 3 data for 47 records.
COALINGA83-IA	Coalinga earthquake of 2 May 1983, Vol. 1 data for first 22 records.
COALINGA83-IB	Coalinga earthquake of 2 May 1983, Vol. 1 data for remaining 25 records.
COALINGA83AS	Vol. 2 and 3 data for eight aftershocks of the Coalinga 2 May 1983 earthquake. The aftershocks occurred between 8 May and 11 September 1983, and were of magnitude (ML) 4.3 - 6.0.
COALINGA83AS-I	Vol. 1 data for the Coalinga aftershock records included on the tape COALINGA83AS.
RIODEL8083	Processed data from the Highway 101 Overpass at Rio Dell for the earthquakes of: 8 Nov 1980 (6.9ML Trinidad-Offshore); 16 Dec 1982 (4.4ML Rio Dell) and 24 Aug 1983 (5.5ML Cape Mendocino Offshore).
MAMMOTH83	Mammoth Lakes earthquakes of 7 Jan 1983 at 01:38 and 03:24 GMT.

Tape Name	Description
MORGANHILL84-IG	Morgan Hill earthquake of 24 April 1984; Vol. 1 data from 19 ground-response stations.
MORGANHILL84-G	Morgan Hill earthquake of 24 April 1984; Vol. 2 and 3 data from 19 ground-response stations.
MORGANHILL84-IS	Morgan Hill earthquake of 24 April 1984; Vol. 1 data from 7 buildings and one bridge.
MORGANHILL84-S	Morgan Hill earthquake of 24 April 1984; Vol. 2 and 3 data from 7 buildings and one bridge.
REDLANDS85	Redlands earthquake of 2 October 1985; data from the Law & Justice Building at Rancho Cucamonga.
BERKELEY86	Berkeley Hills earthquake of 29 March 1986; data from a 2-story Hospital in Berkeley.
HOLLISTER86	Hollister earthquake of 26 January 1986; data from 2 ground-response stations and Hollister - 1-story Warehouse.
MTLEWIS86	Mt. Lewis earthquake of 31 March 1986; data from 1 ground-response station and 3 buildings.
SANSALVADOR86	San Salvador earthquake of October 10, 1986; data from 9 stations.
PALMSPRINGS86-IG	Palm Springs earthquake of 8 July 1986; Vol. 1
PALMSPRINGS86-G	data from 18 ground-response stations. Palm Springs earthquake of 8 July 1986; Vol. 2 and 3 data from 18 ground-response stations.
PALMSPRINGS86-IB	Palm Springs earthquake of 8 July 1986; Vol. 1
PALMSPRINGS86-B	data from 5 buildings. Palm Springs earthquake of 8 July 1986; Vol. 2 and 3 data from 5 buildings.
CHALFANT86	Chalfant earthquake sequence of July 1986 at 9 stations including Lake Crowley - Long Valley Dam.
CERROPRIETO87	Cerro Prieto, Baja California earthquake of February 6, 1987; data from 1 ground-response station.
WHITTIER87-IG	Whittier earthquake of 1 October 1987; Vol. 1 data 36 from 36 ground-response stations.
WHITTIER87-G	Whittier earthquake of 1 October 1987; Vol. 2 and 3 data from 36 ground-response stations.
WHITTIER87-IB1	Whittier earthquake of 1 October 1987; Vol. 1 data from first 10 of the 18 buildings.
WHITTIER87-IB2	Whittier earthquake of 1 October 1987; Vol. 1 data from last 8 of the 18 buildings.
WHITTIER87-IIB	Whittier earthquake of 1 October 1987; Vol. 2 data from all 18 buildings.
WHITTIER87-IIIB	Whittier earthquake of 1 October 1987; Vol. 3 data from all 18 buildings.

Tape Name	Description
WHITTIER87-L	Whittier earthquake of 1 October 1987; Vol. 1, 2 and 3
WHITTIER87-CALTECH	data from 3 lifeline structures (1 bridge and 2 dams). Whittier earthquake of 1 October 1987; Vol. 1, 2 and 3 data from 10 Caltech Stations.
WHEELERRIDGE88	Wheeler Ridge area earthquake of 10 June 1988; data from California Division of Water Resources station at Edmonston Pumping Plant (basement).
ALUMROCK88	Alum Rock earthquake of 12 June 1988; data from Milpitas - 2-story Industrial Building.
LEXINGTON88-89	Lake Elsman earthquakes of 27 June 1988 and 8 August 1989; data from Lexington Dam.
UPLAND90-INTERIM	Upland earthquake of 28 February 1990; Vol. 1, 2 and 3 data from the base-isolated San Bernardino County Law & Justice Center.
LOMAPRIETA89-IG	Loma Prieta earthquake of 17 October 1989; Vol. 1 data from 44 ground-response stations.
LOMAPRIETA89-G	Loma Prieta earthquake of 17 October 1989; Vol. 2 and 3 data from 44 ground-response stations.
LOMAPRIETA89-IB1	Loma Prieta earthquake of 17 October 1989; Vol. 1 data from first 10 of 30 buildings.
LOMAPRIETA89-IB2	Loma Prieta earthquake of 17 October 1989; Vol. 1 data from middle 10 of 30 buildings.
LOMAPRIETA89-IB3	Loma Prieta earthquake of 17 October 1989; Vol. 1 data from last 10 of 30 buildings.
LOMAPRIETA89-IIB1	Loma Prieta earthquake of 17 October 1989; Vol. 2 data from first 15 of 30 buildings.
LOMAPRIETA89-IIB2	Loma Prieta earthquake of 17 October 1989; Vol. 2 data from last 15 of 30 buildings.
LOMAPRIETA89-IIIB	Loma Prieta earthquake of 17 October 1989; Vol. 3 data
LOMAPRIETA89-IL	from all 30 buildings. Loma Prieta earthquake of 17 October 1989; Vol. 1 data
LOMAPRIETA89-L	from all 7 lifeline structures. Loma Prieta earthquake of 17 October 1989; Vol. 2 and 3 data from all 7 lifeline structures.
SIERRAMADRE91-INT1	Sierra Madre earthquake of 28 June 1991; Vol. 1, 2 and 3 data from the 7 ground-response, 3 buildings and 1 lifeline station.

Footnotes:

Each tape contains Vol. 1 data (uncorrected acceleration), Vol. 2 data (corrected acceleration, velocity and displacement) and Vol. 3 data (response and Fourier amplitude spectra) unless otherwise specified. The magnetic tapes are provided at cost. Included with each tape is a copy of either the processed data report (if available) or the plots of the data.

The Vol. 2 and 3 data are also available on floppy disks for use in personal computers. Requests for the reports, data tapes, data disks and/or for additional information should be addressed to:

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Division of Mines and Geology
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801 K Street, MS 13-35
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